TC-K555ES

US Model
Canadian Model
AEP Model
UK Model
E Model

SONY
3 HEAD
STEREO CASSETTE DECK TC-K555ES

'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

STEREO CASSETTE DECK

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Fast-forward and rewind time	Approx. 90 sec. (with C-60 cassette)
Bias frequency	105 kHz

Signal-to-noise ratio (NAB, at peak level)

Cassette \ Dolby NR switch	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METALLIC)	60 dB	67 dB	73 dB
TYPE III (Sony FeCr)	62 dB	69 dB	75 dB
TYPE II (Sony UCX)	59 dB	66 dB	72 dB
TYPE I (Sony BHF)	56 dB	63 dB	69 dB

Total harmonic distortion
0.8 % (with Sony METALLIC and FeCr cassettes)

Frequency response DOLBY NR OFF

- With TYPE IV cassette (Sony METALLIC)
  20 - 19,000 Hz
  25 - 18,000 Hz (±3 dB)
  25 - 14,000 Hz (±3 dB, 0 VU recording)
  25 - 19,000 Hz (DIN)
- With TYPE III cassette (Sony FeCr)
  20 - 19,000 Hz
  25 - 18,000 Hz (±3 dB)
  25 - 19,000 Hz (DIN)
- With TYPE II cassette (Sony UCX)
  20 - 18,000 Hz
  25 - 17,000 Hz (±3 dB)
  25 - 17,000 Hz (DIN)
- With TYPE I cassette (Sony BHF)
  20 - 18,000 Hz
  25 - 17,000 Hz (DIN)

Wow and flutter 0.04 % WRMS (NAB)
±0.12 % (DIN)

— Continued on page 2 —

Tape Transport Mechanism Type	**TCM-110C3**

[illegible]

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

[illegible]

MICROFILM

SERVICE MANUAL

Inputs	Line inputs (phono jacks) Sensitivity 77.5 mV (−20 dB) Input impedance 50 k ohms
Outputs	Line outputs (phono jacks) Output level 0.435 V (−5 dB) at a load impedance of 50 k ohms Load impedance over 10 k ohms Headphone output Output level, variable from −20 dB to −50 dB at a load impedance of 8 ohms

General

Power requirements	AEP model: 220 V ac, 50/60 Hz (240 V ac adjustable by authorized Sony personnel) UK model: 240 V ac, 50/60 Hz (220 V ac adjustable by authorized Sony personnel) US, Canadian model: 120 V ac, 60 Hz E model: 110, 120, 220 or 240 V ac adjustable, 50/60 Hz
Power consumption	26 watts
Dimensions	Approx. 430 × 105 × 285 mm (w/h/d) ($17 \times 4\frac{1}{4} \times 11\frac{1}{4}$ inches) including projecting parts and controls
Weight	Approx. 6.1 kg (13 lbs 8 oz)

Peak program meters

Response range	−40 dB to +8 dB
Frequency response	20 – 20,000 Hz ±1.5 dB
Response time	1 millisecond
Decay time (from 0 dB to −20 dB)	750 milliseconds
Overshoot	none

0 dB = 0.775 V

* * *

FEATURES

Three-head system

Separate record and playback heads allow optimum gap settings and impedance ratings for distortion-free recording and greatly extended frequency response. For good tape-to-head contact the heads are mounted in one block and each head is separately adjusted for precise azimuth alignment. The three-head system also enables you to monitor the recorded tape while actually recording.

Newly-developed LA (LaserAmorphous) head

The record/playback head is made of a special amorphous magnetic alloy developed by Sony, and its cores are solidly welded by laser. This new highly-durable head provides a wider dynamic range and a more extended frequency response, especially in the high-frequency range. The head is designed to take full advantage of the potential of the metal tapes.

Closed-loop dual-capstan tape drive system

Two pairs of capstans and pinch rollers ensure uniform tape tension and stable tape-to-head contact. As a result, wow and flutter and modulation noise are greatly reduced.

Dolby C-type NR (noise reduction) system

In addition to the conventional B-type Dolby NR system, this cassette deck employs the newly-developed C-type Dolby NR system which reduces tape noise twice as effectively as the B-type system. The C-type system also incorporates an anti-saturation network to improve the high-frequency dynamic range by 4 dB at 10 kHz.

Digital linear counter

This counter indicates the recording or playback time elapsed on the tape so that the tape can be precisely indexed. While conventional displays can only indicate the elapsed recording time, this display can indicate with a minus sign how much recording time remains.

Bright FL-display peak program meters

The peak program meters follow the transient peaks of the music and maintain the peak readings for about 4 seconds. This double indication makes it easy to set critical recording levels precisely.

Remote control operation

Using the optional RM-50 or RM-80 remote control unit, various operations—recording, playback, record muting operation, etc.—can be remotely controlled.

When the RM-65 synchro remote control unit is used to connect this cassette deck with a turntable equipped with a synchro remote control jack, the operation of the cassette deck and the turntable will be synchronized.

Two motors

The two-motor drive system assures accurate and stable tape transport. The capstan is driven by a linear torque BSL (brushless and slotless) motor to keep wow and flutter low and to provide smooth torque.

Useful functions

- ●Record muting function allows you to easily insert a moderately long blank space between selections.
- ●Auto play permits one step rewind and playback from the beginning of the tape and the memory function allows you to easily locate any desired point on the tape.
- ●A timer switch is provided to turn the deck on and off any number of times at preset times set on an optional timer.

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

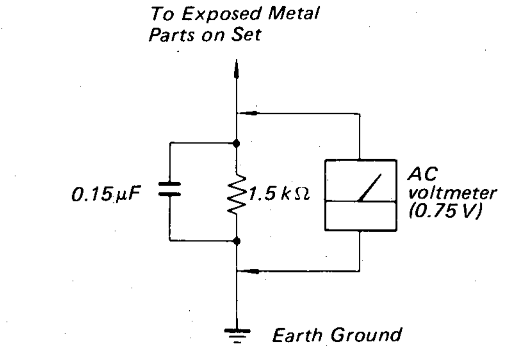
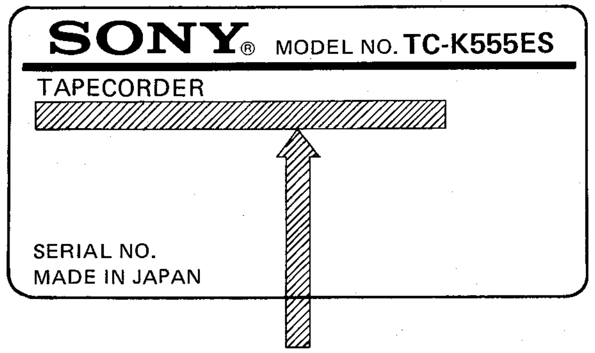

To Exposed Metal Parts on Set
0.15 μF
1.5 kΩ
AC voltmeter (0.75 V)
Earth Ground

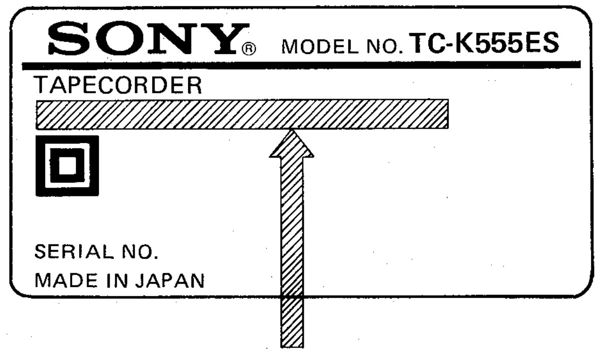
Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

– Specification Label –


SONY® MODEL NO. TC-K555ES
TAPECORDER
SERIAL NO.
MADE IN JAPAN

US, Canadian model: AC 120 V 60 Hz 26 W


SONY® MODEL NO. TC-K555ES
TAPECORDER
SERIAL NO.
MADE IN JAPAN

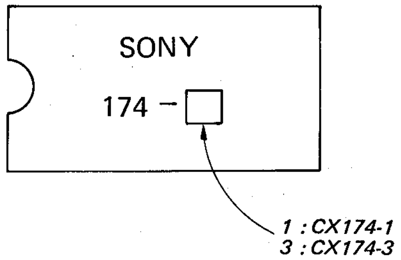
AEP model: AC 220 V ~ 50/60 Hz 26 W
UK model: AC 240 V ~ 50/60 Hz 26 W
E model: AC 110, 120, 220, 240 V ~ 50/60 Hz 26 W

Caution on DOLBY IC (CX174) Replacement

This set uses eight Dolby ICs (CX174). (IC101, 102, 201, 202, 301, 302, 401, 402)

These ICs are either CX174-1 or CX-174-3.

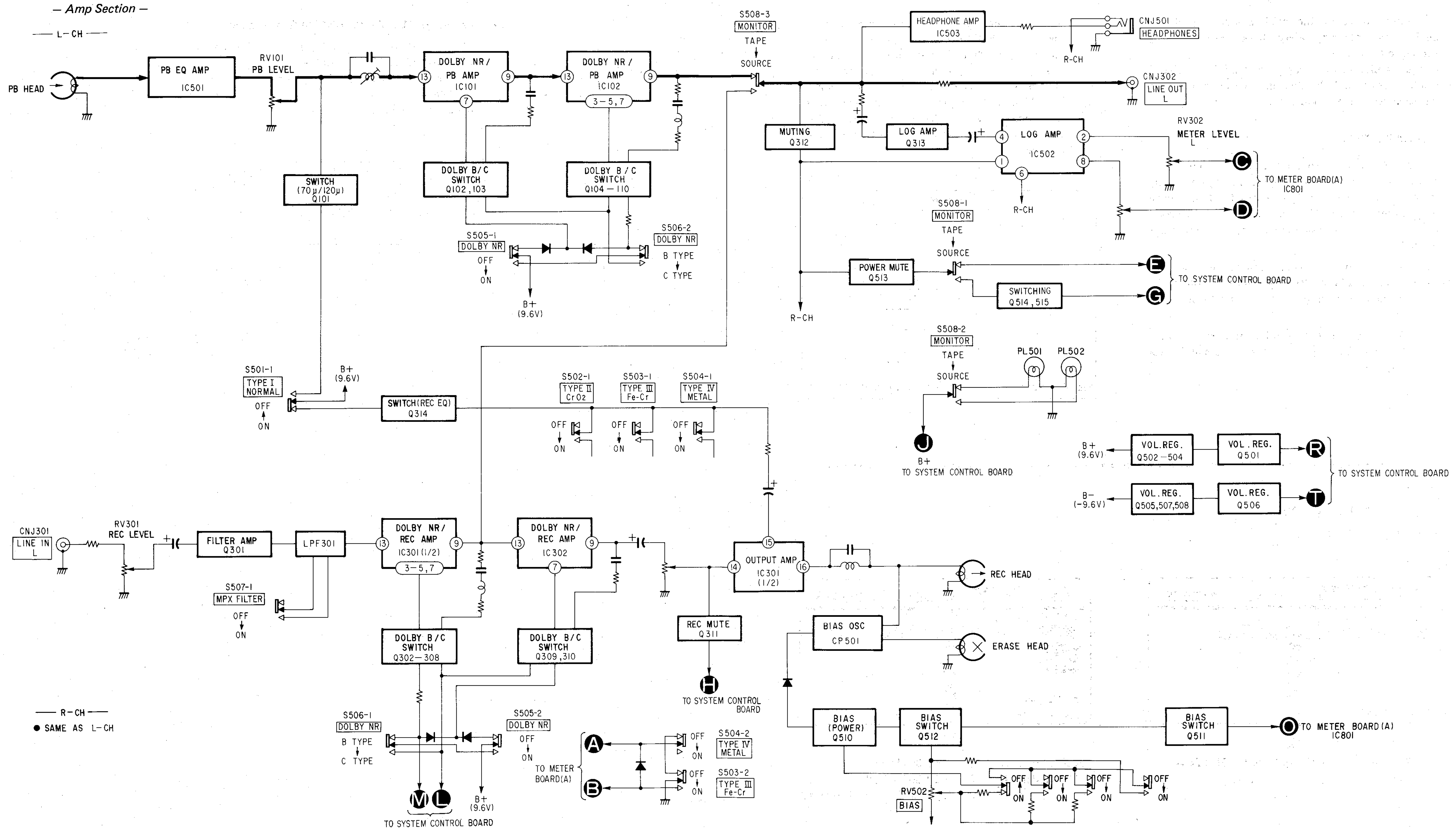
When replacing these ICs, be sure to use the same ICs as the original one.


SONY
174 – □
1 : CX174-1
3 : CX174-3

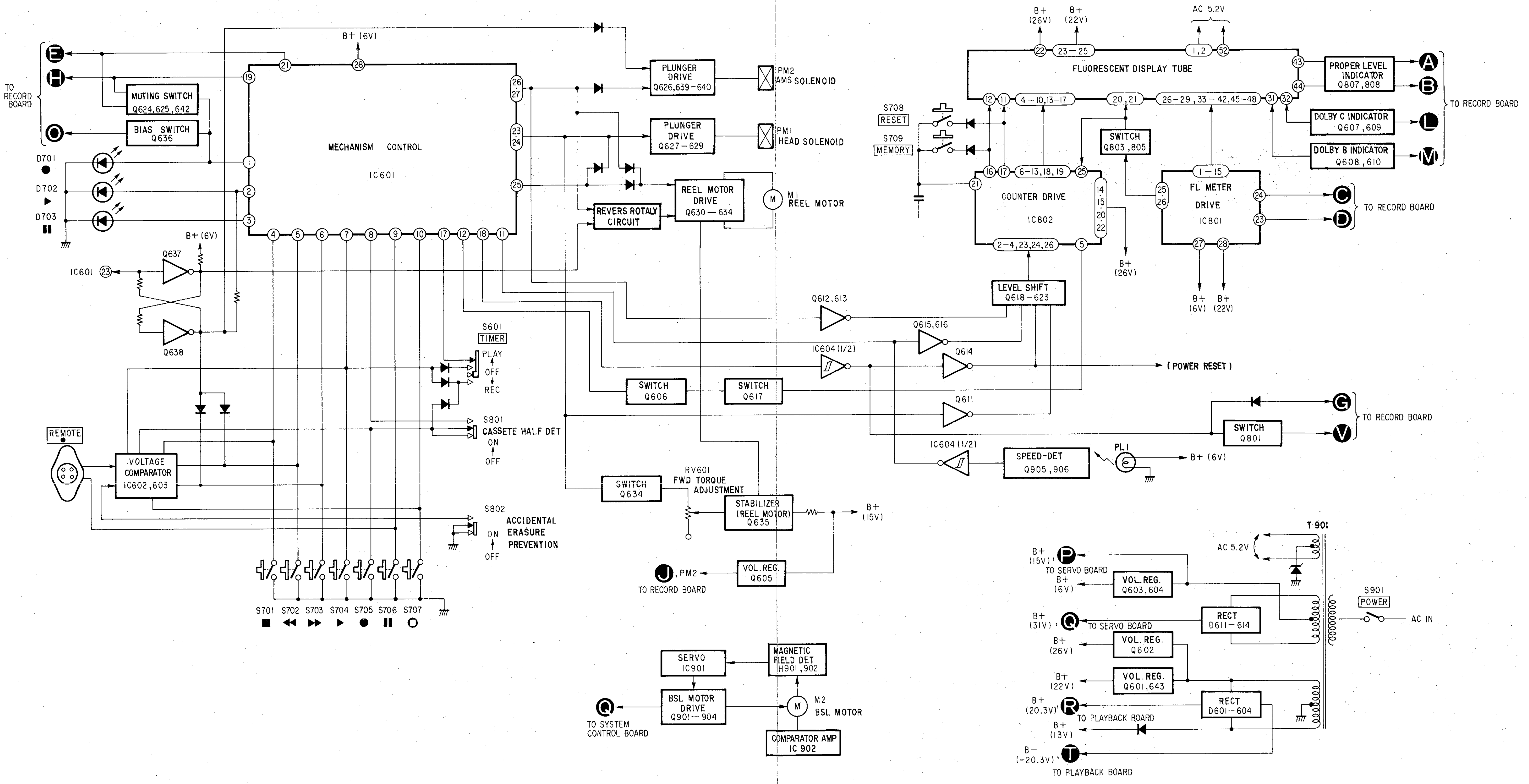
SECTION 1
OUTLINE

1-1. BLOCK DIAGRAMS

— Amp Section —

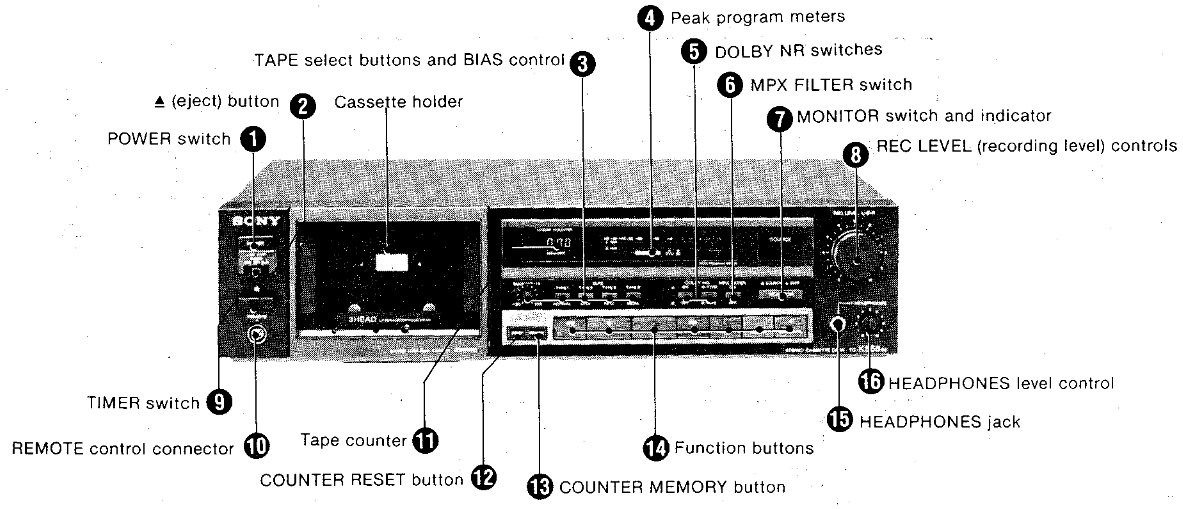

— L-CH —
PB HEAD
PB EQ AMP
IC501
RV101
PB LEVEL
DOLBY NR / PB AMP IC101
DOLBY NR / PB AMP IC102
3-5,7
DOLBY B/C SWITCH Q102,103
DOLBY B/C SWITCH Q104-110
SWITCH (70μ/120μ) Q101
S505-1 DOLBY NR
OFF ↓ ON
S506-2 DOLBY NR
B TYPE ↓ C TYPE
B+ (9.6V)
S508-3 MONITOR
TAPE ↓ SOURCE
HEADPHONE AMP IC503
CNJ501 HEADPHONES
R-CH
CNJ302 LINE OUT L
MUTING Q312
LOG AMP Q313
LOG AMP IC502
RV302 METER LEVEL L
TO METER BOARD(A) IC801
S508-1 MONITOR
TAPE ↓ SOURCE
POWER MUTE Q513
SWITCHING Q514,515
TO SYSTEM CONTROL BOARD
S508-2 MONITOR
TAPE ↓ SOURCE
PL501
PL502
B+
TO SYSTEM CONTROL BOARD
S501-1 TYPE I NORMAL
OFF ↑ ON
SWITCH (REC EQ) Q314
S502-1 TYPE II CrO2
S503-1 TYPE III Fe-Cr
S504-1 TYPE IV METAL
OFF ↓ ON
B+ (9.6V) VOL.REG. Q502-504
VOL.REG. Q501
B- (-9.6V) VOL.REG. Q505,507,508
VOL.REG. Q506
TO SYSTEM CONTROL BOARD
CNJ301 LINE IN L
RV301 REC LEVEL
FILTER AMP Q301
LPF301
S507-1 MPX FILTER
OFF ↓ ON
DOLBY NR / REC AMP IC301 (1/2)
DOLBY NR / REC AMP IC302
OUTPUT AMP IC301 (1/2)
REC HEAD
REC MUTE Q311
TO SYSTEM CONTROL BOARD
BIAS OSC CP501
ERASE HEAD
DOLBY B/C SWITCH Q302-308
DOLBY B/C SWITCH Q309,310
S506-1 DOLBY NR
B TYPE ↓ C TYPE
S505-2 DOLBY NR
OFF ↓ ON
TO SYSTEM CONTROL BOARD
TO METER BOARD(A)
S504-2 TYPE IV METAL
S503-2 TYPE III Fe-Cr
BIAS (POWER) Q510
BIAS SWITCH Q512
BIAS SWITCH Q511
TO METER BOARD(A) IC801
RV502 BIAS
B- (9.6V)
S501-2 TYPE I NORMAL
S502-3 TYPE II CrO2
S503-3 TYPE III Fe-Cr
S504-3 TYPE IV METAL
— R-CH —
● SAME AS L-CH

– System Control Section –


TO RECORD BOARD
MUTING SWITCH Q624,625,642
BIAS SWITCH Q636
D701
D702
D703
B+ (6V)
Q637
IC601 ㉓
Q638
MECHANISM CONTROL
IC601
PLUNGER DRIVE Q626,639−640
PM2 AMS SOLENOID
PLUNGER DRIVE Q627−629
PM1 HEAD SOLENOID
REEL MOTOR DRIVE Q630−634
M1 REEL MOTOR
REVERS ROTALY CIRCUIT
S601 TIMER
PLAY
OFF
REC
S801 CASSETE HALF DET
ON
OFF
REMOTE
VOLTAGE COMPARATOR IC602,603
S802 ACCIDENTAL ERASURE PREVENTION
ON
OFF
S701 S702 S703 S704 S705 S706 S707
■ ◀◀ ▶▶ ▶ ● ❚❚ ○
SWITCH Q606
SWITCH Q617
SWITCH Q634
RV601 FWD TORQUE ADJUSTMENT
STABILIZER (REEL MOTOR) Q635
B+ (15V)
VOL. REG. Q605
Ⓙ, PM2
TO RECORD BOARD
SERVO IC901
MAGNETIC FIELD DET H901,902
BSL MOTOR DRIVE Q901−904
M2 BSL MOTOR
COMPARATOR AMP IC 902
Ⓠ
TO SYSTEM CONTROL BOARD
Q612,613
Q615,616
IC604 (1/2)
Q614
(POWER RESET)
Q611
SWITCH Q801
IC604 (1/2)
SPEED-DET Q905,906
PL1
B+ (6V)
B+ (26V)
B+ (22V)
AC 5.2V
FLUORESCENT DISPLAY TUBE
PROPER LEVEL INDICATOR Q807,808
DOLBY C INDICATOR Q607,609
DOLBY B INDICATOR Q608,610
S708 RESET
S709 MEMORY
SWITCH Q803,805
COUNTER DRIVE
IC802
FL METER DRIVE
IC801
LEVEL SHIFT Q618−623
B+ (26V)
B+ (6V)
B+ (22V)
Ⓐ Ⓑ Ⓛ Ⓜ Ⓒ Ⓓ Ⓖ Ⓥ Ⓔ Ⓗ Ⓞ
T 901
S901 POWER
AC IN
AC 5.2V
B+ (15V) Ⓟ
TO SERVO BOARD
B+ (6V)
VOL. REG. Q603,604
RECT D611−614
B+ (31V) Ⓠ
TO SERVO BOARD
B+ (26V)
VOL. REG. Q602
B+ (22V)
VOL. REG. Q601,643
RECT D601−604
B+ (20.3V) Ⓡ
TO PLAYBACK BOARD
B+ (13V)
B− (−20.3V) Ⓣ
TO PLAYBACK BOARD

1-2. FUNCTION OF CONTROLS

The numbers in the photo are keyed to the following explanations.



① POWER switch
Depress this switch to turn on the power. The lamp in the cassette holder, the display of the peak program meter and the tape counter will light up. The indicator lamp of the pause button will blink for about 4 seconds, indicating that the function buttons are inoperative during this period.
Press this switch again to turn the power off.

② ▲ (eject) button
Press this button to open the cassette holder.

③ TAPE select buttons and BIAS control
Depress one of the TAPE select buttons according to the type of tape to be used. When the appropriate button is depressed, the optimum equalization and bias current settings are obtained for recording, and the optimum equalization setting is obtained for playback. When recording using a TYPE I (NORM), TYPE II (CrO_2) or TYPE III (Fe-Cr) tape, adjust the BIAS control. See "Recommended settings for the TAPE select buttons and the BIAS control", on page 11.

④ Peak program meters
With the MONITOR switch set to SOURCE, the meters show the peak input level of each channel, and to TAPE, the meters show recorded levels. They follow the transient peaks of high-level inputs that are too brief to be followed by conventional VU meters so that the optimum recording level can be accurately set. The highest input of each channel is held about 4 seconds on the scale, except when a higher peak occurs before 4 seconds have passed, in which case that peak is immediately indicated.

⑤ DOLBY NR switches
The left switch turns the Dolby NR* (Noise Reduction) system on and off and the right switch selects either the B-type or C-type Dolby NR system.
To record with the Dolby NR process, depress the ON/OFF switch to the ON position and choose B-TYPE (⊓) or C-TYPE (▭).
To record without the Dolby NR process, press the ON/OFF switch again to release.
When playing back, set these switches to the same position used in recording.

⑥ MPX FILTER switch
Normally set this switch to OFF.
When recording FM stereo broadcasts with the Dolby NR system, set it to ON if the 19 kHz pilot signal and the 38 kHz subcarrier have not been adequately suppressed by the FM tuner or receiver.
If the tuner or the receiver suppresses such signals adequately (most high-quality tuners and receivers will), you do not have to set this switch to ON.

⑦ MONITOR switch and indicator
When adjusting the recording level, set this switch to the released position (SOURCE ⊓) to allow monitoring of the sound to be recorded. During playback, depress this switch (TAPE ▭) to allow monitoring of the recorded sound. According to the MONITOR switch setting, "SOURCE" or "TAPE" will appear in the indicator window.
During recording, use this switch to monitor either the source or the recorded sound.

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* "Dolby" and the double-D symbol are trade marks of the Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

⑧ REC LEVEL (recording level) controls
These controls adjust the recording level. The knob nearest the panel is for the left channel and the other knob for the right channel. To adjust the level of the left or right channel only, turn the appropriate knob while holding the other knob.

⑨ TIMER switch
You can set the unit to record or play back at a predetermined time by connecting any commercially available timer. To record, set this timer switch to REC. To play back, set it to PLAY.

⑩ REMOTE control connector
Connect the optional RM-50 (wired) or RM-80 (wireless) remote control unit to operate the tape transport functions from a distance. Synchronized operation is also possible with selected Sony turntables, using the optional RM-65 synchro remote control unit. Read the instruction manual of your remote control unit before operating it.

⑪ Tape counter
This counter indicates the tape running time.

⑫ COUNTER RESET button
Press this button to reset the tape counter to "0.00."

⑬ COUNTER MEMORY button
Press to rewind the tape to the "0.00" point on the tape counter. The word "MEMORY" is displayed below the tape counter. Pressing the ► button together with the ◄◄ button automatically starts playback from "0.00."
When you do not use the memory function, press this button again. The word "MEMORY" will disappear.

⑭ Function buttons
It is possible to switch directly from one mode to another. The indicator lamps light when the tape deck is in the forward, record or pause mode.

◄◄ (rewind) button : Press this button to rewind the tape. This button is also used, with the ► button, to initiate auto play.

■ (stop) button : To stop the tape, press this button. The tape will stop automatically when it is completely wound in either direction.
► (forward) button : Press this button to play the tape back. To record, press this button while holding the ● button down.
►► (fast-forward) button : Press this button to advance the tape rapidly.
● (record) button : Press this button together with the ► button to start recording.
❙❙ (pause) button : To pause for a moment during recording or playback, press this button. This button is also used to control more precisely the start of recording and to release the record muting mode.
○ (record muting) button : Press this button to eliminate unwanted material and to insert a blank space during recording.

⑮ HEADPHONES jack
Headphones may be inserted either to monitor the input signals to be recorded or to listen to a recording in the playback mode. Headphone volume is adjustable with the HEADPHONES control.

⑯ HEADPHONES level control
This control adjusts the headphone level. This setting does not affect the peak program meters or the output level of the LINE OUT jacks at the rear.

1-3. RECORDING

RECOMMENDED SETTINGS FOR THE TAPE SELECT BUTTONS AND BIAS CONTROL

Press the appropriate TAPE select button referring to the recommended settings listed below. When recording using a TYPE I (normal), TYPE II (CrO_2) or TYPE III (Fe-Cr) tape, adjust the BIAS control also.

While the settings are optimum for Sony cassettes, you may want to change them when using cassettes produced by other manufactures.

Tape list (for Canada)

Tapes (C-60 and C-90)		Type of tape
SONY : LNX, SHF MAXELL : UD, UD-XL I, XL I-S SCOTCH : MASTER I	AMPEX : GRAND MASTER I FUJI : FX-I MEMOREX : MRX-1 TDK : AD, AD-X	TYPE I (NORMAL)
SONY : UCX-S, EHF MAXELL : UD-XL II, XLII-S SCOTCH : MASTER II	AMPEX : GRAND MASTER II FUJI : FX-II MEMOREX : HIGH BIAS II TDK : SA, SA-X	TYPE II (CrO_2)
SONY : FeCr SCOTCH : MASTER III	BASF : PROFESSIONAL III	TYPE III (Fe-Cr)
SONY : METALLIC	Other metal tapes	TYPE IV (METAL)

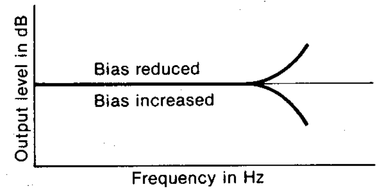
Tape list (for other countries)

Tapes (C-60 and C-90)		Type of tape
SONY : AHF, BHF BASF : LH-X, Professional I MAXELL : UD, UD-XL I, XL I-S SCOTCH : MASTER I	AGFA : SUPER FERRO DYNAMIC FUJI : FX-I PHILIPS : SUPER FERRO-I TDK : AD	TYPE I (NORMAL)
SONY : UCX-S, UCX BASF : Professional II MAXELL : UD-XLII, XLII-S SCOTCH : MASTER II	AGFA : STEREO CHROM FUJI : FX-II PHILIPS : CHROMIUM TDK : SA, SA-X	TYPE II (CrO_2)
SONY : FeCr BASF : Professional III SCOTCH : MASTER III	AGFA : CARAT PHILIPS : FERRO CHROMIUM	TYPE III (Fe-Cr)
SONY : METALLIC	Other metal tapes	TYPE IV (METAL)

The three-head system permits you to monitor the recorded sound while in the record mode, so that you can easily check the effects of various settings of the TAPE select buttons and the BIAS control.

BIAS control

This control regulates bias current for TYPE I (NORM), TYPE II (CrO_2) and TYPE III (Fe-Cr) cassettes. The full counterclockwise position decreases bias by about 20% from the center position and the full clockwise position increases it by about 20%. Generally, as bias is increased, extreme high frequencies will be suppressed. As bias is reduced, extreme high frequencies will be boosted. You can then find the appropriate bias setting for each brand of TYPE I, TYPE II and TYPE III cassettes.

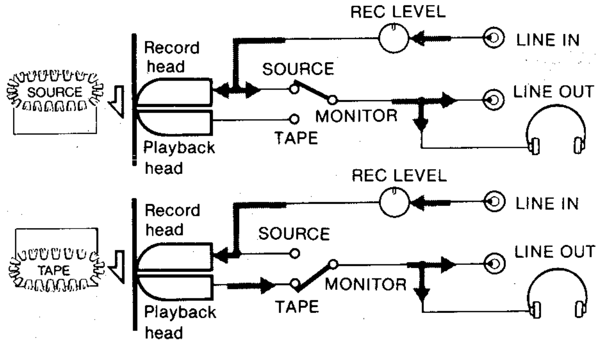


RECORD MONITORING

As this tape deck has separate record and playback heads, you can easily compare the source and the recorded sounds in the recording mode by using the MONITOR switch. You can check the recording level and whether there is any contamination on the heads that is affecting the recording.

- ●If the connected amplifier has a tape monitor selector, source/tape comparison is possible with the amplifier monitor selector. In this case, set the tape deck MONITOR switch to TAPE.

MONITOR switch setting and signal flow



TO RECORD MATERIAL ONTO A SPECIFIC PORTION OF TAPE

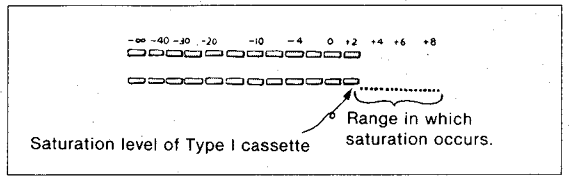
When you want to re-record a specific portion of tape or to insert new material between two points on a tape you will find it handy to be able to change directly from the playback to the record mode by pressing the ● REC button while holding the ► button down.

1-4. TO ADJUST THE RECORDING LEVEL

Adjust the recording level while monitoring on the peak program meters the input level of the program source to be recorded. If the recording level setting is too high, the recording will be distorted, and if the setting is too low, the recording will be noisy. The recording level should be set as high as possible while still avoiding distortion. This level will depend on the type of tape being used.

When the TAPE button is pressed, the range above the saturation level of the selected type of tape is indicated by the red line. Generally speaking, adjust the recording level by making sure that the meters deflect only to the left end of the red line at the highest signal level.

Example: Type I cassette


−∞ −40 −30 −20 −10 −4 0 +2 +4 +6 +8
Range in which saturation occurs.
Saturation level of Type I cassette

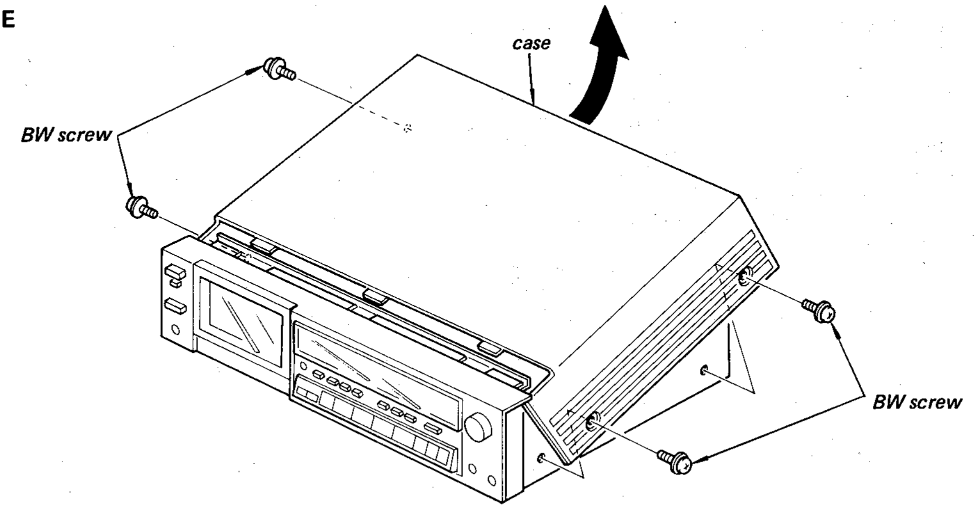
Since the saturation level of any tape is lower in the higher frequencies than in the lower frequencies, the recording level may still be too high if adjusted in this way if the program to be recorded contains many high frequency signals. Consideration has to be given to the program source to be recorded as well as to the characteristics of the cassette to be used, since each cassette, even cassettes using the same type of tape, may have different characteristics. The following table will provide you with a starting point in setting the recording level of various kinds of programs when using Sony cassettes.

Type of tape	Sony cassettes	Low and mid freq. range programs (vocal, etc.)	Mid and high freq. range programs (piano, guitar, etc.)
I	BHF	+ 3 dB	+ 1 dB
	AHF	+ 4 dB	+ 2 dB
II	UCX	+ 3 dB	+ 2 dB
III	FeCr	+ 5 dB	+ 1 dB
IV	METALLIC	+ 6 dB	+ 6 dB

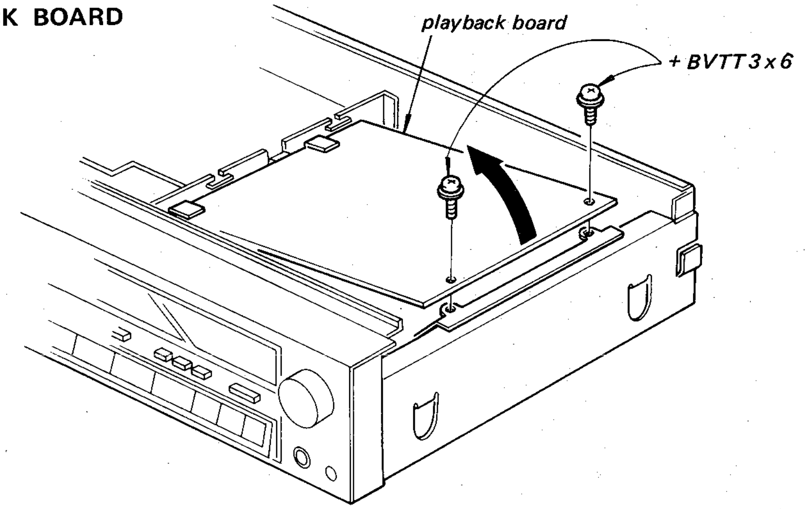
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

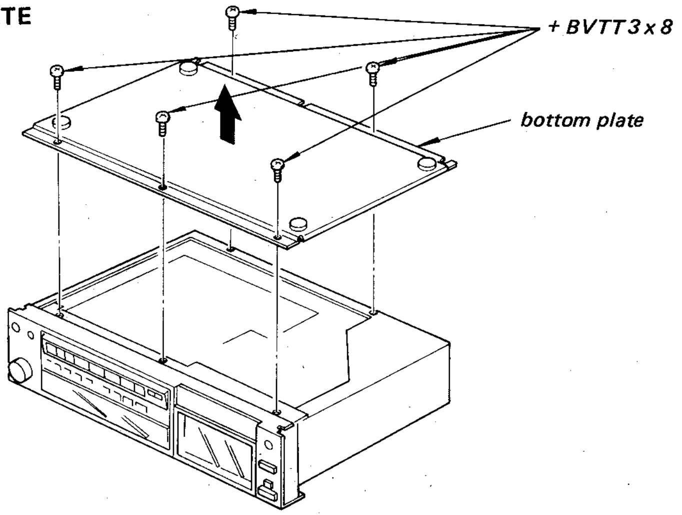
CASE


case
BW screw
BW screw

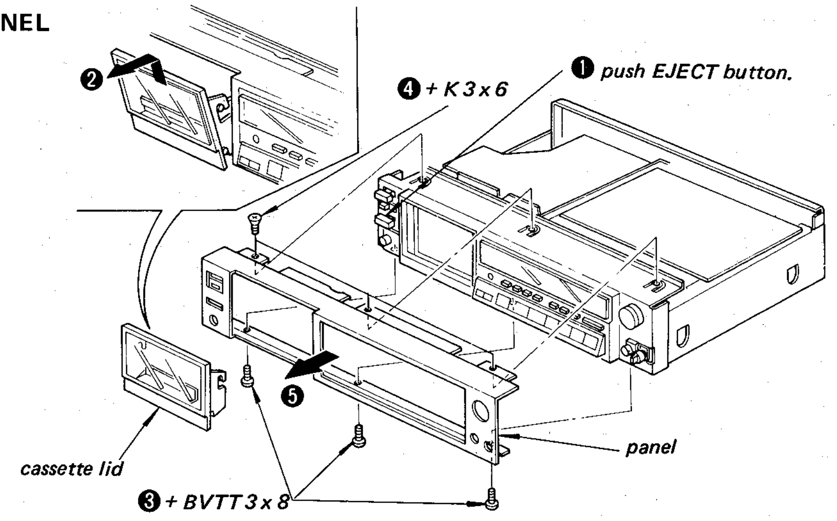
PLAYBACK BOARD


playback board
+ BVTT 3 x 6

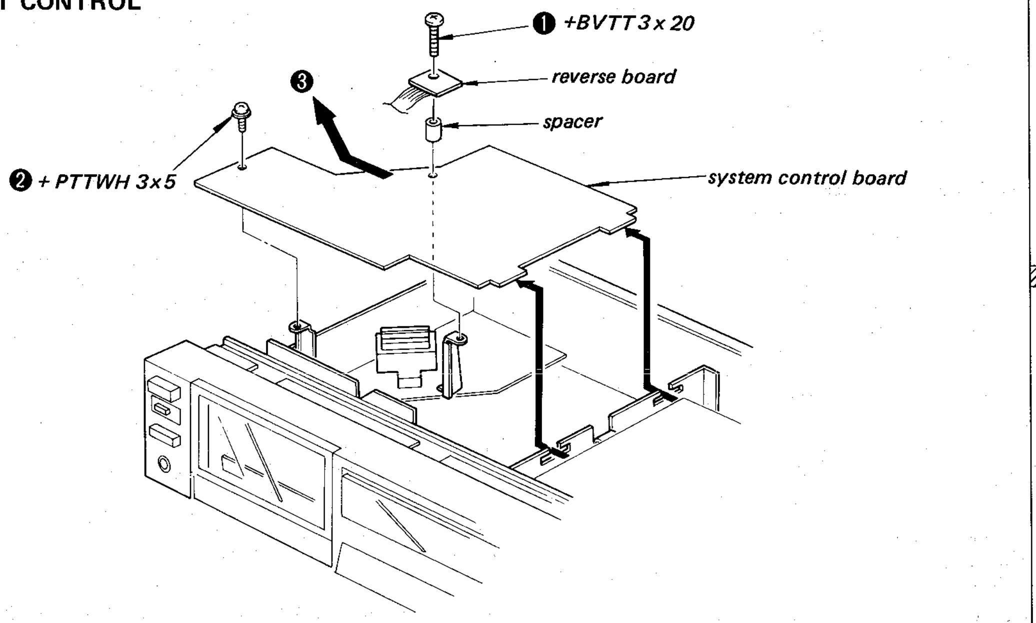
BOTTOM PLATE


+ BVTT 3 x 8
bottom plate

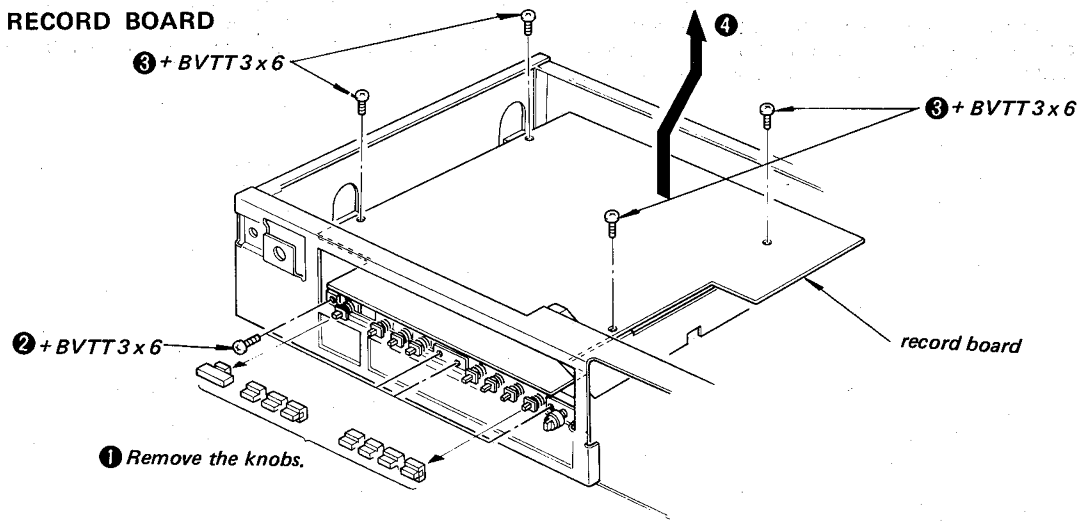
CASSETTE LID/PANEL


❶ push EJECT button.
❷
❹ + K 3 x 6
❺
panel
cassette lid
❸ + BVTT 3 x 8

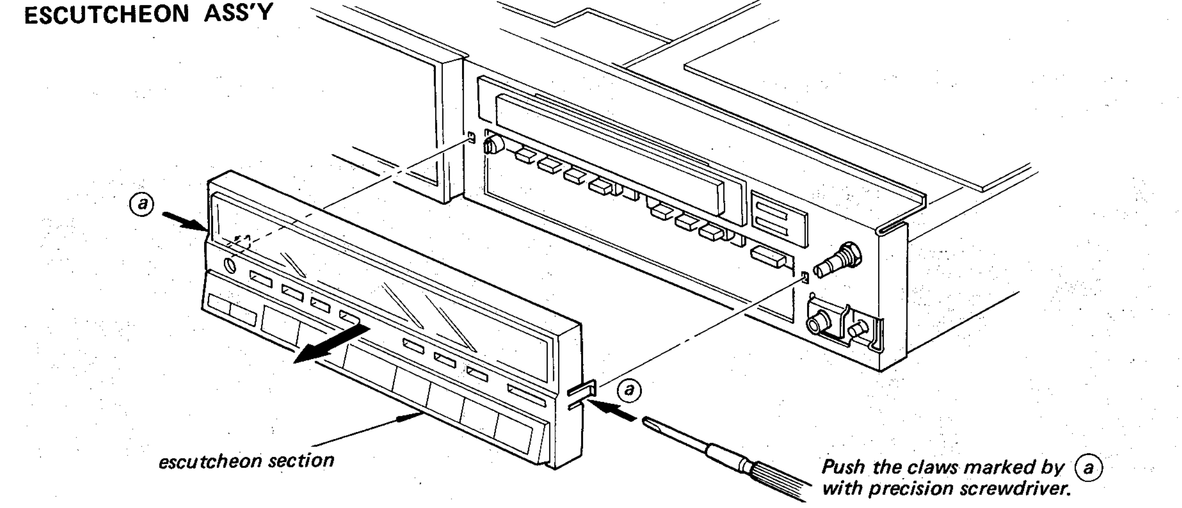
SYSTEM CONTROL BOARD


❶ +BVTT 3 x 20
reverse board
❸
spacer
❷ + PTTWH 3x5
system control board

RECORD BOARD

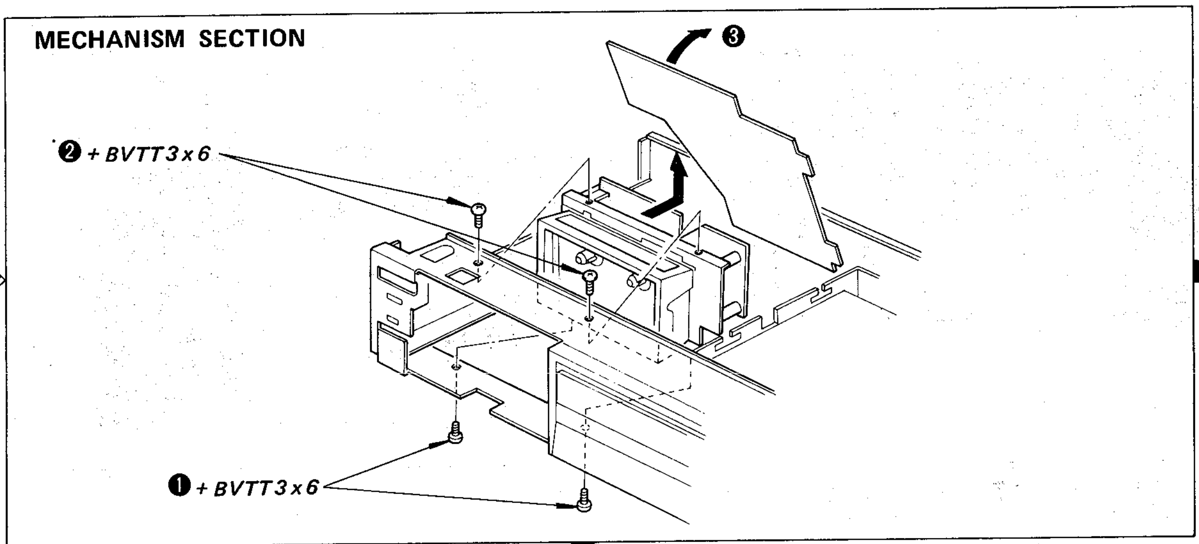

❸ + BVTT 3 x 6
❹
❸ + BVTT 3 x 6
❷ + BVTT 3 x 6
record board
❶ Remove the knobs.

ESCUTCHEON ASS'Y



Push the claws marked by ⓐ with precision screwdriver.

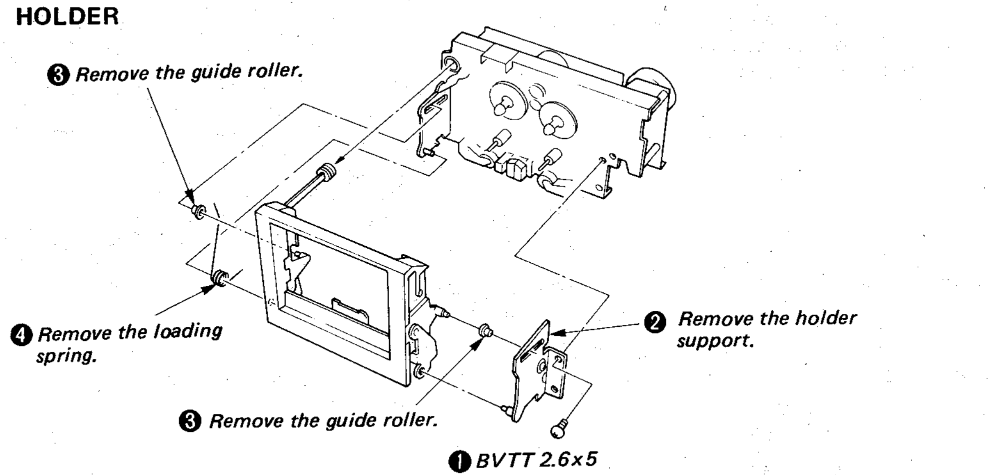
MECHANISM SECTION



❷ + BVTT3x6

❶ + BVTT3x6

CASSETTE HOLDER



❸ Remove the guide roller.

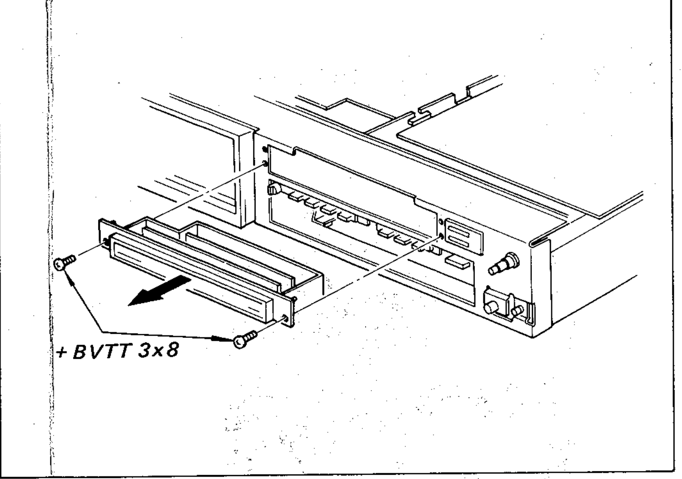
❹ Remove the loading spring.

❸ Remove the guide roller.

❷ Remove the holder support.

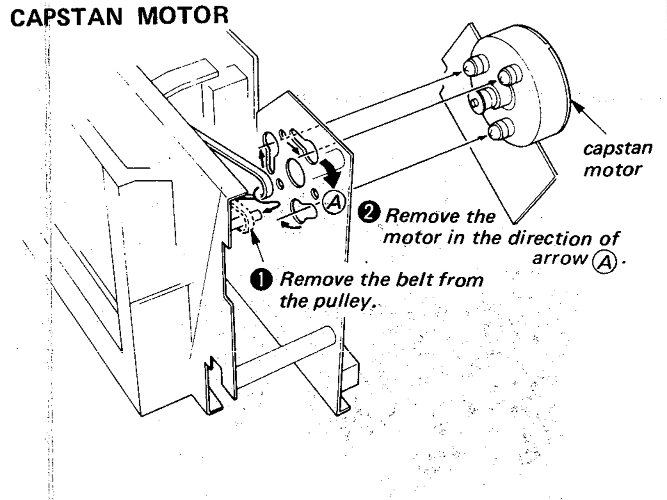
❶ BVTT 2.6x5

METER



+BVTT 3x8

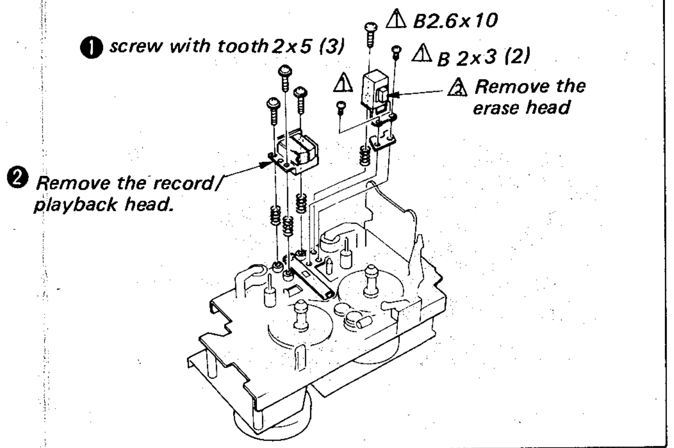
CAPSTAN MOTOR



❷ Remove the motor in the direction of arrow Ⓐ.

❶ Remove the belt from the pulley.

RECORD/PLAYBACK HEAD.......... ❶~❷
ERASE HEAD................................. ⚠~⚠



❶ screw with tooth 2x5 (3)

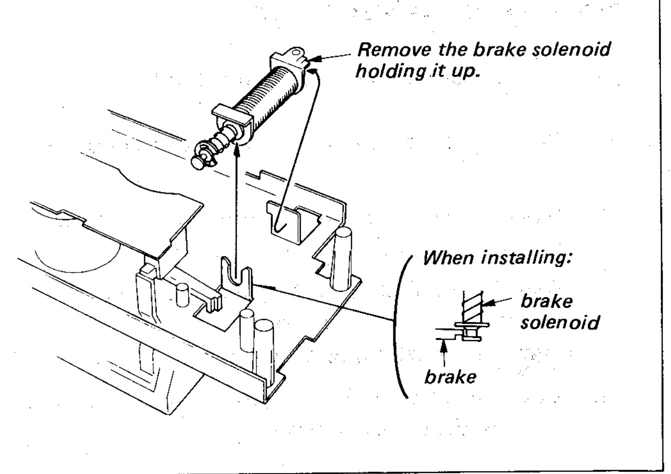
⚠ B2.6x10

⚠ B 2x3 (2)

❷ Remove the record/ playback head.

⚠ Remove the erase head

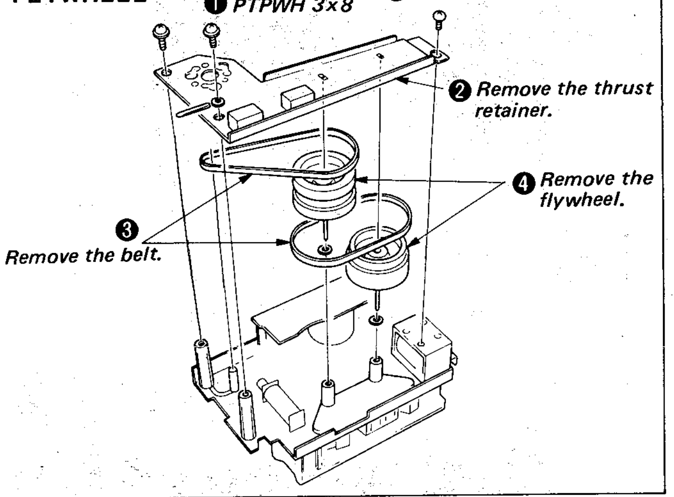
AMS SOLENOID



Remove the brake solenoid holding it up.

When installing:

FLYWHEEL



❶ PTPWH 3x8

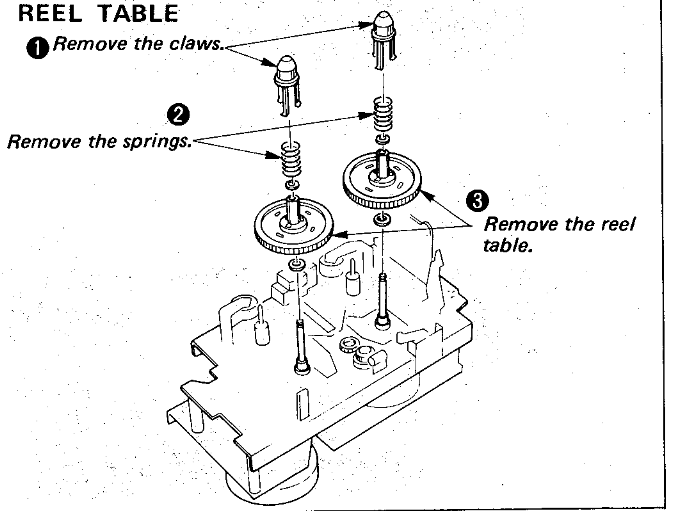
❶ BVTT 3x5

❷ Remove the thrust retainer.

❹ Remove the flywheel.

❸ Remove the belt.

REEL TABLE



❶ Remove the claws.

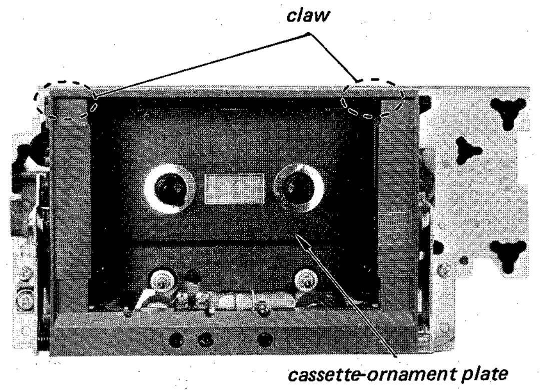
❷ Remove the springs.

❸ Remove the reel table.

CASSETTE-ORNAMENT PLATE

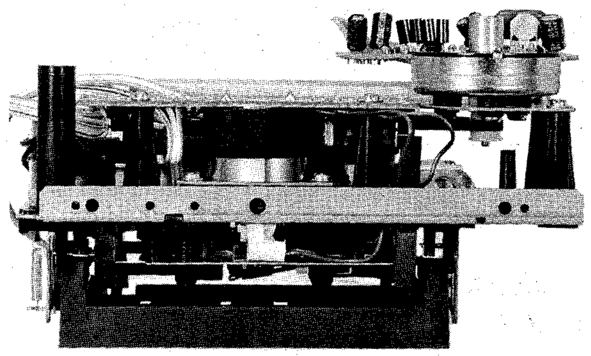
Note: This plate does not need screws to be installed.

1. Press the ejection button and open the cassette lid.
2. Release the two claws from the cassette-ornament plate at both the top corners.
3. Depress the REC detecting lever and the half detecting levers at the inside of the set and remove the cassette-ornament plate.
4. When reinstalling the cassette-ornament plate, perform the steps in a reverse manner.

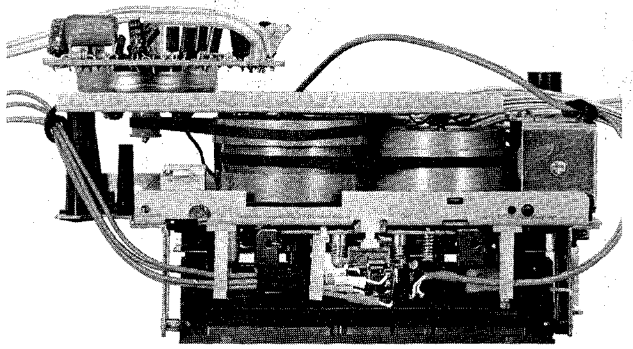

claw
cassette-ornament plate

MECHANISM SECTION PHOTOGRAPHS

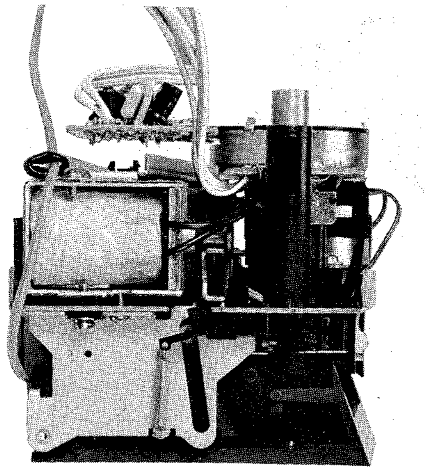
1. Top View with Cassete Holder Shut:



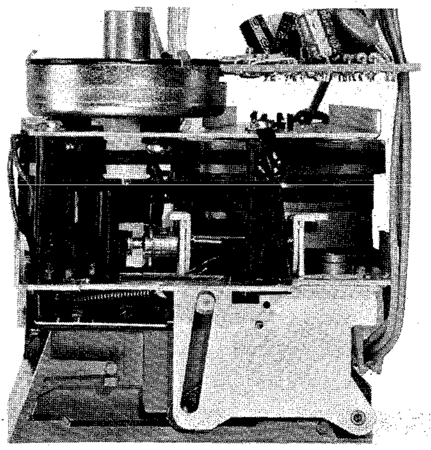
2. Bottom View with Cassette Holder Shut:



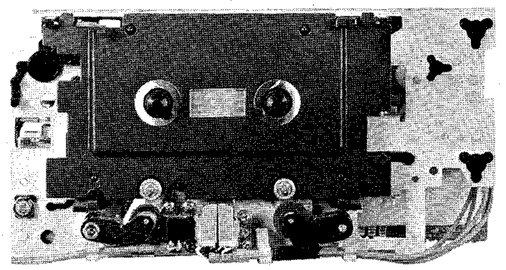
3. Left Side View with Cassette Holder Shut:



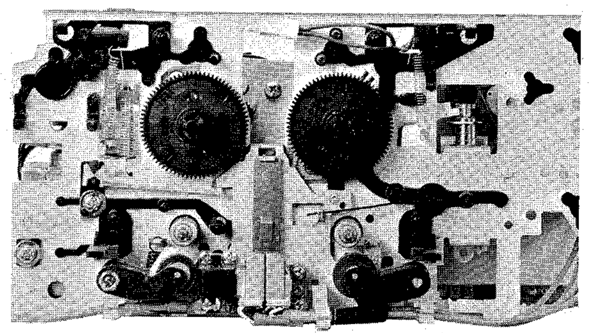
4. Right Side View with Cassette Holder Shut:



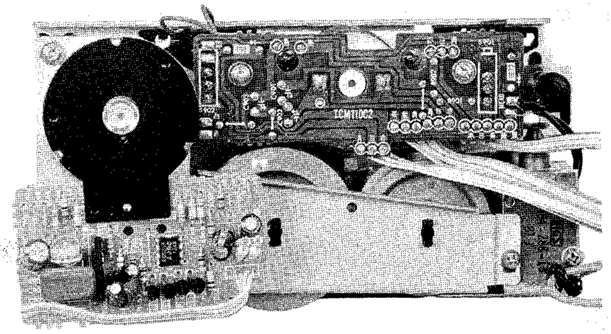
5. Front View with Cassette Holder Removed:



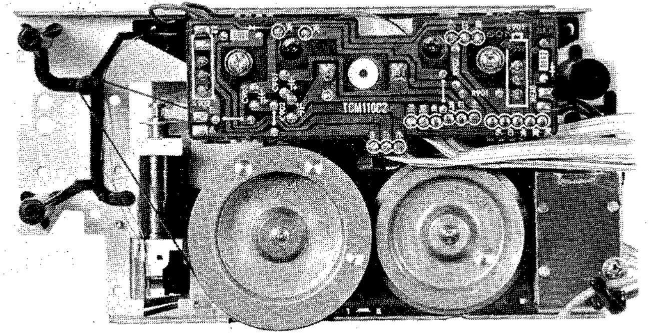
6. Front View with Cassette Holder and Cassette-Ornament Plate Removed:



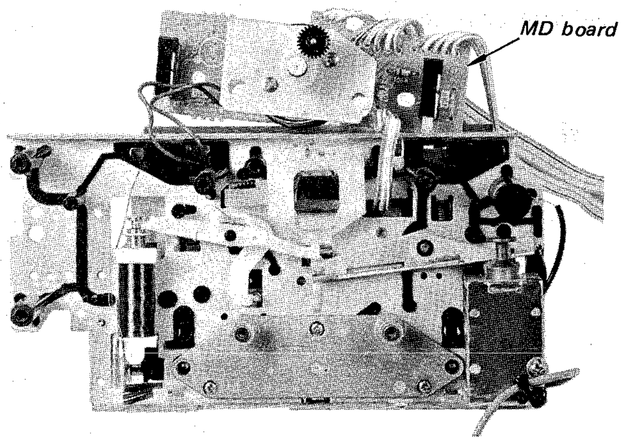
7. Rear View:



8. Bottom View with Thrust Retainer and DC Motor Removed:



9. Bottom View with Switch Board and Flywheel (T) Removed:



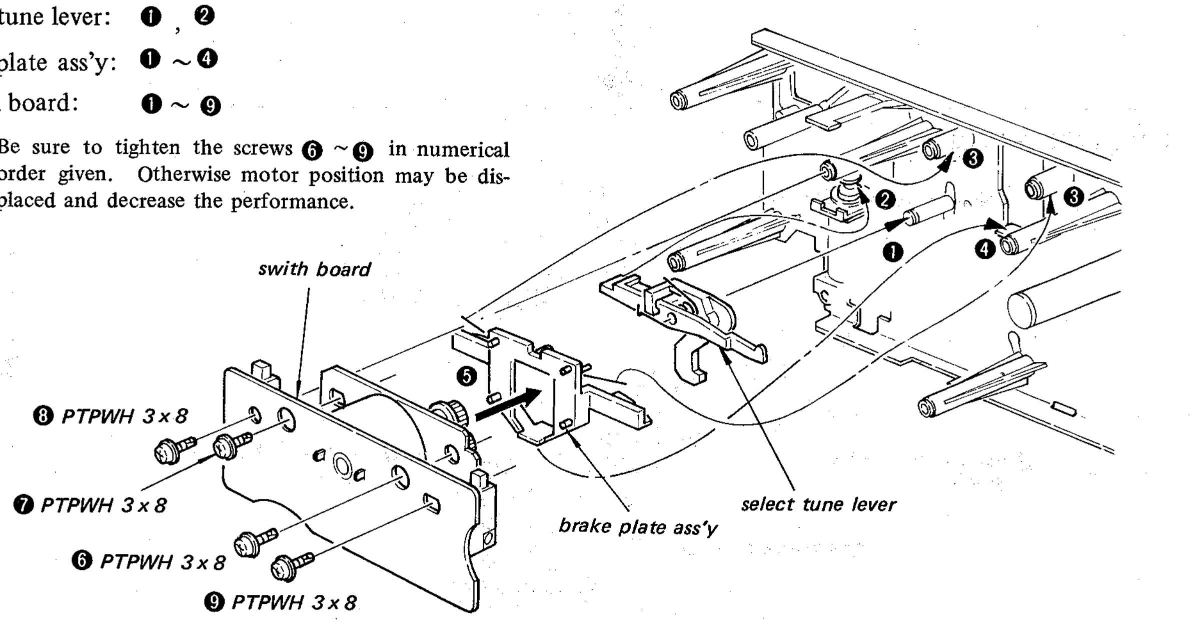
SELECT TUNE LEVER/BRAKE PLATE ASS'Y/ SWITCH BOARD

Select tune lever: ❶ , ❷

Brake plate ass'y: ❶ ~ ❹

Switch board: ❶ ~ ❾

Note: Be sure to tighten the screws ❻ ~ ❾ in numerical order given. Otherwise motor position may be displaced and decrease the performance.


swith board
❽ PTPWH 3×8
❼ PTPWH 3×8
❻ PTPWH 3×8
❾ PTPWH 3×8
❺
❶
❷
❸
❹
❸
brake plate ass'y
select tune lever

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

FF/REW Torque Measurement

Torque	Torque meter	Meter reading
FF REW	CQ-201B	65 – 85 g•cm

Tape Path Adjustment

1. Insert a mirror cassette (CQ-009C).
2. Set for forward mode and confirm that there is no tape curl at the tape guides and recording head.
3. If there is curl, turn the adjust nut and raise and lower the supply side pinch roller (with tape guide attached) to adjust.
4. If step 3 does not get rid of the curl, adjust further by turning adjustment screws A, B, C less than 1/2 turn in the same direction at the same angle.
5. Confirm that the erase head height is as shown in Figure 2.
6. Check tape wrinkling (zigzag).
   Tighten adjust screw D if the tape is wrinkling up. (clockwise)
   Loosen screw D if the tape is wrinkling downward. (conterclockwise)
   Repeat step 5 after adjusting screw D as necessary, within 1/2 turn.
7. Lock the screw with locking compound.

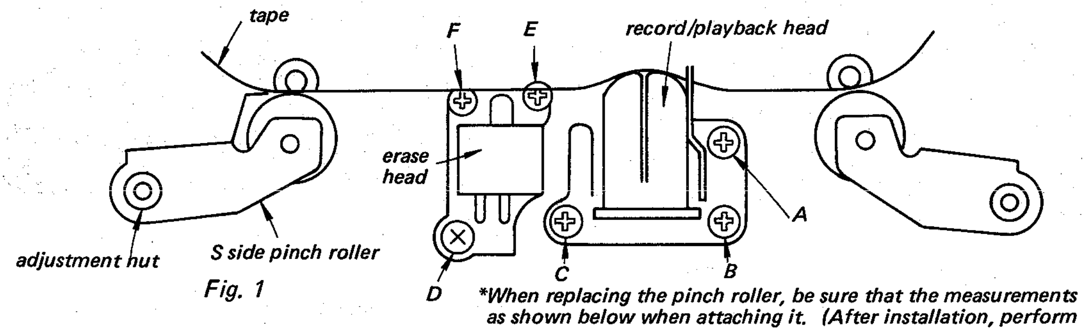


Fig. 1

*When replacing the pinch roller, be sure that the measurements are as shown below when attaching it. (After installation, perform the above adjustment.)

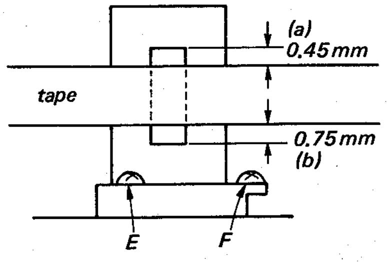


Fig. 2

1. Loosen screws E, F so that the ratio between a and b is 3 : 5 and adjust with the adjustment shim.
2. When changing erase head height, check for tape wrinkling.

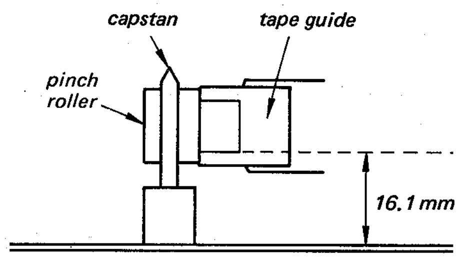
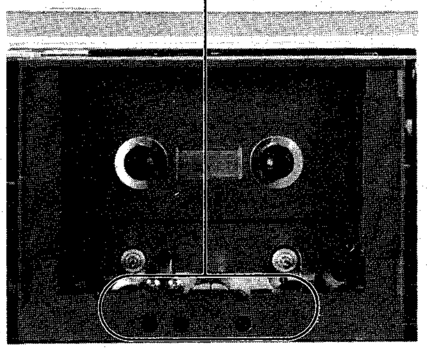


Fig. 3

tape path adjustment



Head Base Position Adjustment

Perform the following adjustment when replacing the head base solenoid.

Perform with the old head base solenoid still in place.

1. Press the head base solenoid core with the finger until the head base stops moving.
2. Draw a line as shown in Figure 2. Replace with the new head base solenoid.
3. Loosen the mounting screw, match with the line drawn in step 2, and tighten the screw.
4. Lock the screw after adjustment.

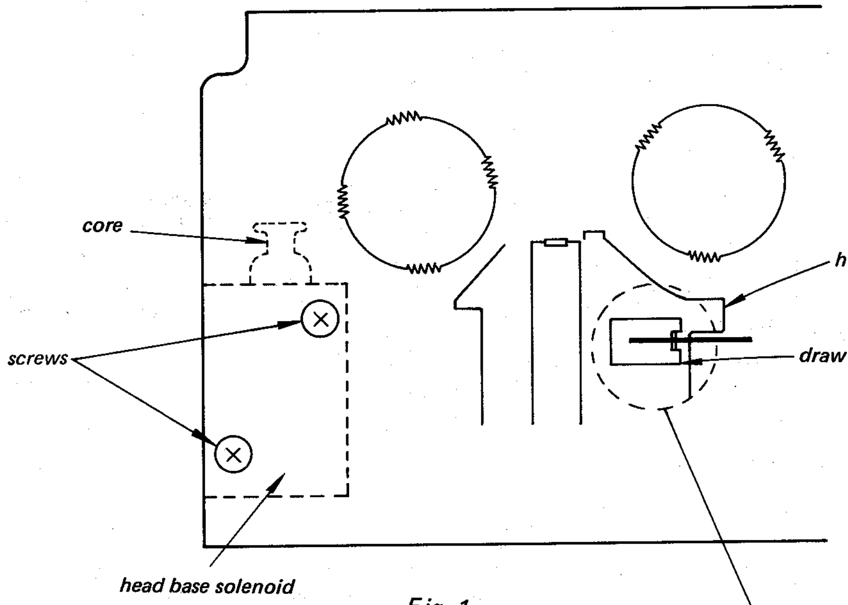


Fig. 1

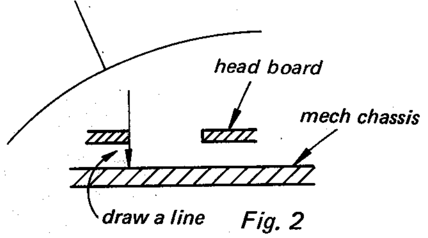
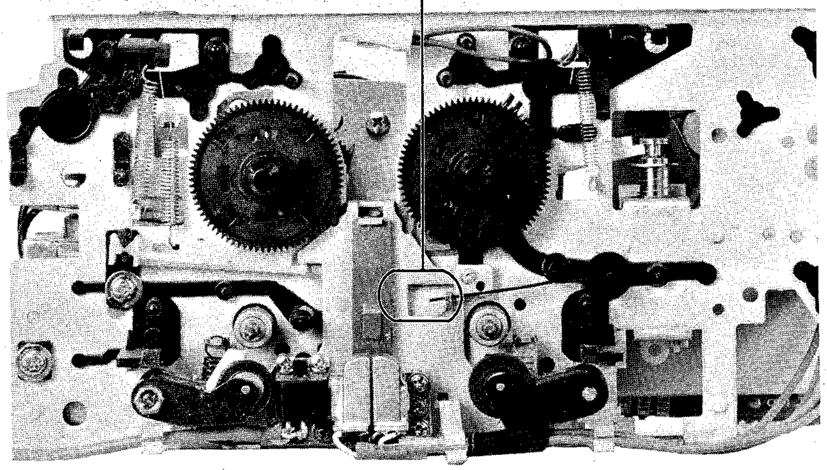


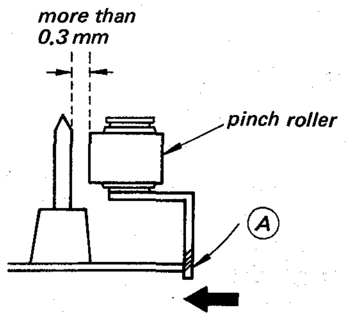
Fig. 2

head base position adjustment



Pinch Roller Clearance Adjustment

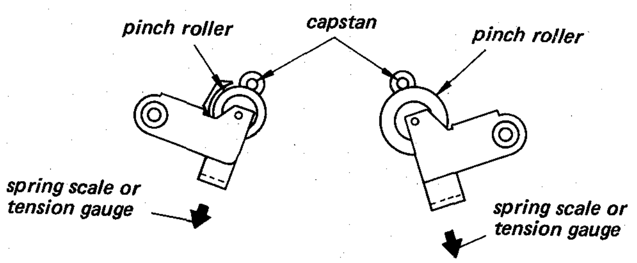
1. Confirm that the clearance between the pinch roller and capstan is more than 0.3 mm in pause mode.
2. If it is less than 0.3 mm, bend Ⓐ in the direction of the arrow.

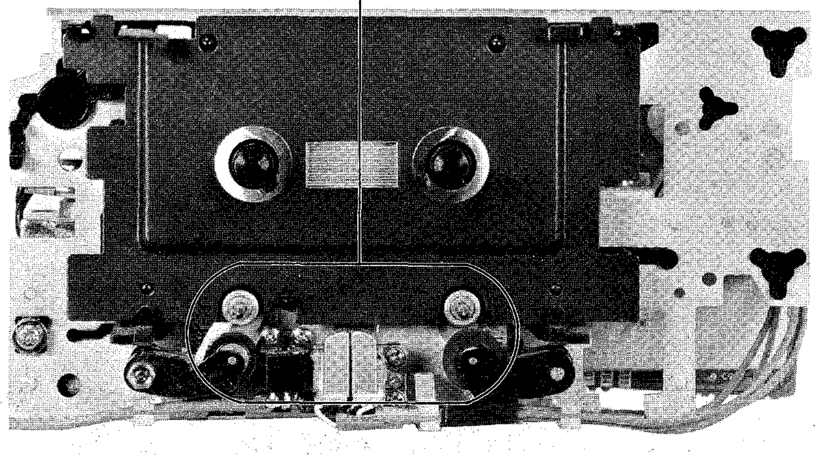

more than
0.3 mm
pinch roller
Ⓐ

Pinch Roller Pressure Measurement

1. Confirm that the pinch roller is parallel to the capstan.
2. Set in forward, move the pinch roller away from the capstan, then back toward it, and measure the value at the point where the pinch roller begins to rotate.

T side 270 – 330 g
S side 180 – 280 g


pinch roller
capstan
pinch roller
spring scale or tension gauge
spring scale or tension gauge

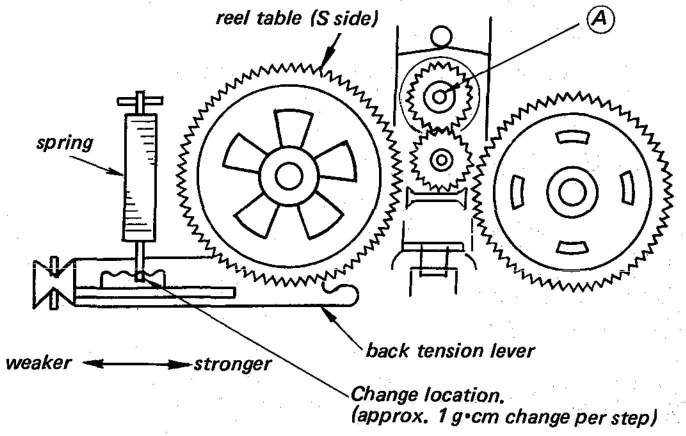

pinch roller clearance adjustment

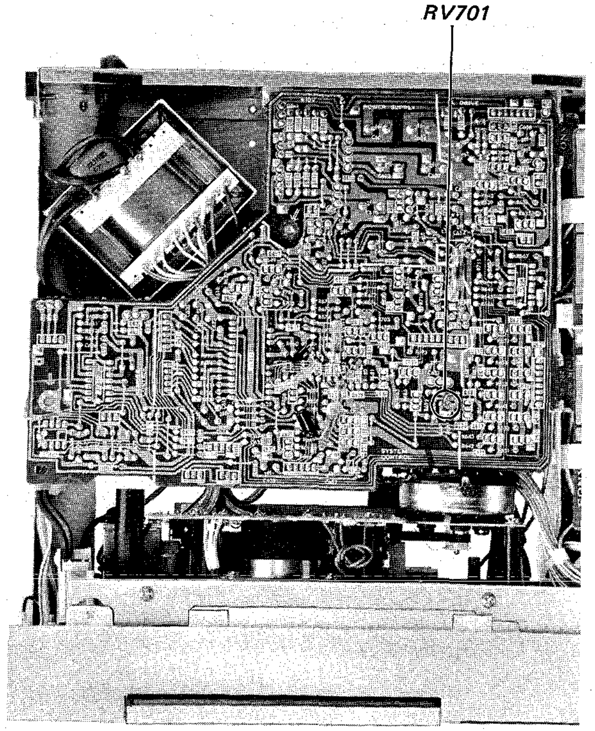
Forward Torque Adjustment

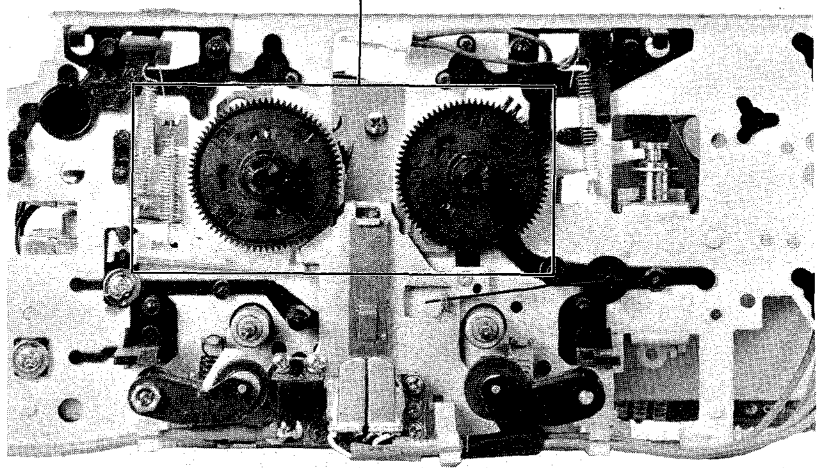
1. Remove the ornamental plate.
2. Press the cassette detection switch and T side reel table simultaneously by hand and then press the forward button. In this state, hold the T reel table so that it does not rotate.
3. Now adjust RV701 to the position where Ⓐ begins to rotate.
   (It will shut off immediately, so press the forward button to repeat.)
4. Next insert CQ-102C, and measure forward torque and back tension torque. If back tension torque is not within the specifications, change the location where the spring is hooked.

Specifications:

forward torque: 30 – 60 g·cm
back tension torque: 7 – 10.5 g·cm


reel table (S side)
Ⓐ
spring
weaker
stronger
back tension lever
Change location.
(approx. 1 g·cm change per step)





3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

Tape	TAPE switch
CS-15	TYPE I
CS-25	TYPE II
CS-30	TYPE III
CS-40	TYPE IV

- Switches and controls should be set as follows unless otherwise specified.

  DOLBY NR switch: OFF
  TAPE switch: TYPE I
  TIMER switch: OFF
  LINE OUT/HEADPHONES: MAX

- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

	LINE IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

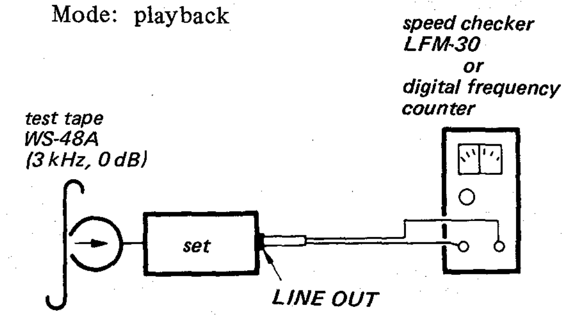
Standard Output Level

	HEADPHONES	LINE OUT
load impedance	8 Ω	47 kΩ
output level	77 mV (-20 dB)	0.44 V (-5 dB)

Tape Speed adjustment

Procedure:

Mode: playback

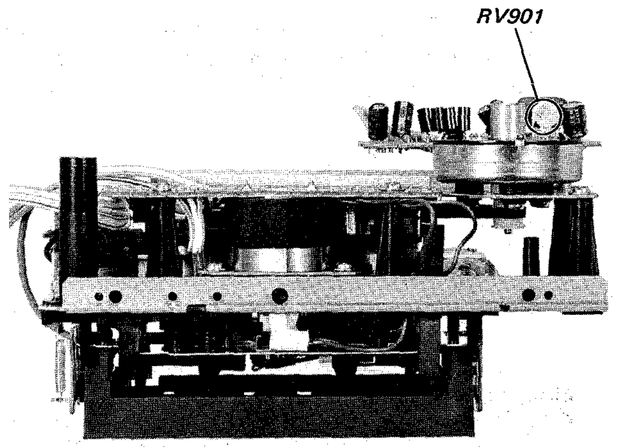

speed checker
LFM-30
or
digital frequency
counter
test tape
WS-48A
(3 kHz, 0 dB)
set
LINE OUT

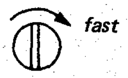
Specification:

Speed checker	Digital frequency counter
-0.17 to +0.17%	2,995 – 3,005 Hz

Frequency difference between the beginning and the end of the tape should be within 0.34% (10 Hz).

Adjustment Location:

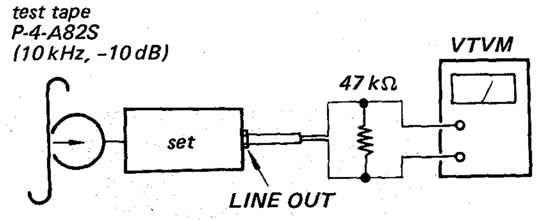




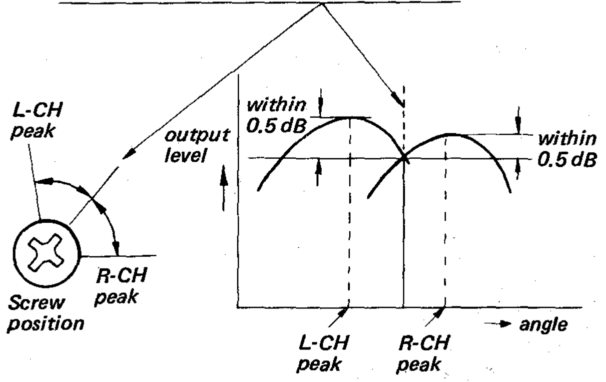
Playback Head Azimuth Adjustment

Procedure:

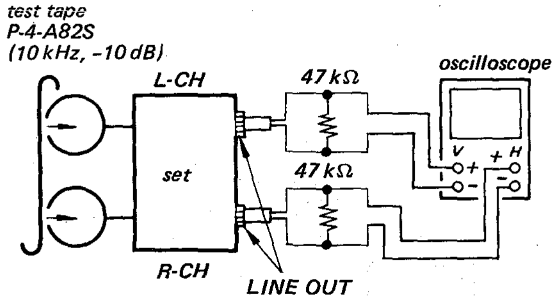
1. Mode: playback

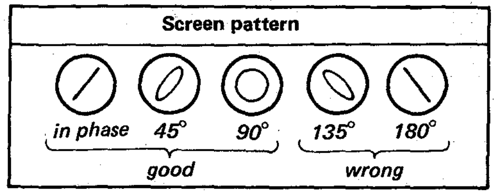

test tape
P-4-A82S
(10 kHz, -10 dB)
VTVM
47 kΩ
set
LINE OUT

2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

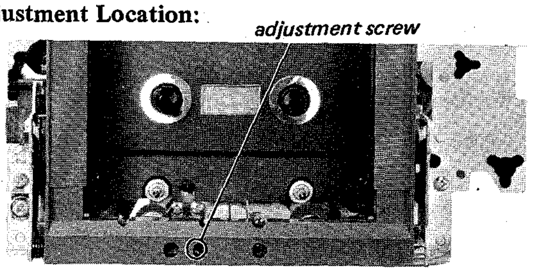

L-CH
peak
output
level
within
0.5 dB
within
0.5 dB
R-CH
peak
Screw
position
L-CH
peak
R-CH
peak
angle

3. Phase Check
   Mode: playback


test tape
P-4-A82S
(10 kHz, -10 dB)
L-CH
47 kΩ
oscilloscope
set
47 kΩ
V
H
R-CH
LINE OUT


Screen pattern
in phase
45°
90°
135°
180°
good
wrong

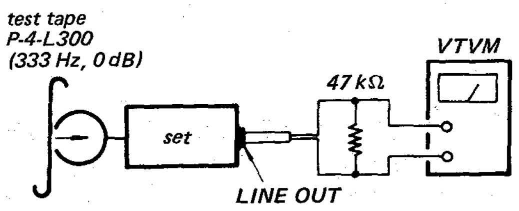
Adjustment Location:


adjustment screw

Playback Level Adjustment

Procedure:

Mode: playback


test tape
P-4-L300
(333 Hz, 0 dB)
VTVM
47 kΩ
set
LINE OUT

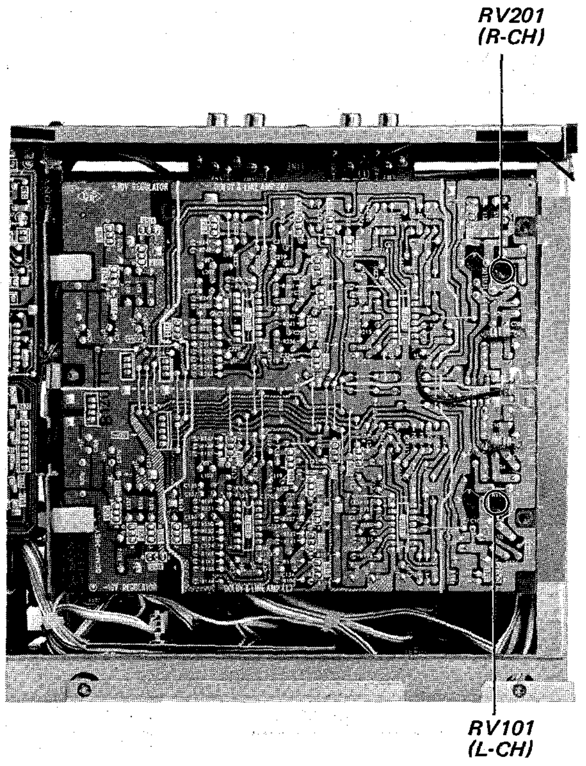
Specification:

LINE OUT level: 0.52 ~ 0.59 V
(-3.5 ~ -2.5 dB)
Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location:

– playback board –


RV201
(R-CH)
RV101
(L-CH)

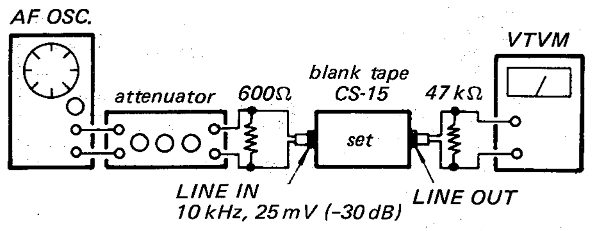
Record Head Azimuth Adjustment (Record head azimuth adjustment should be made later than playback head azimuth adjustment.)

Setting:

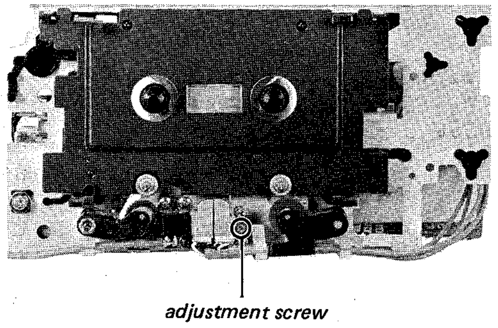
MONITOR: TAPE
REC LEVEL control: standard record (See page 23)
TAPE: TYPE I

Procedure:

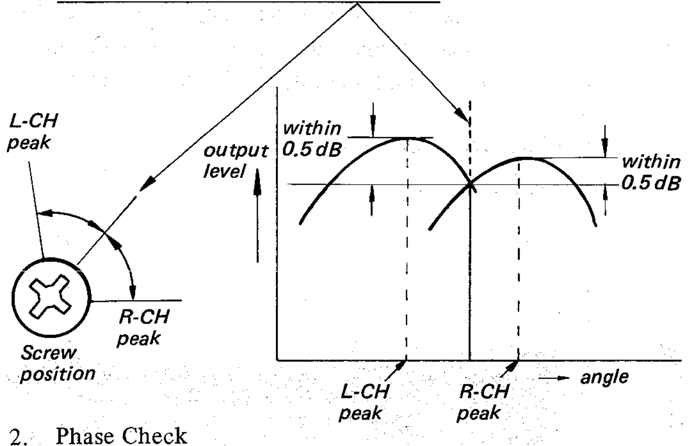
record and playback mode


AF OSC.
VTVM
attenuator
600Ω
blank tape CS-15
47 kΩ
set
LINE IN
10 kHz, 25 mV (-30 dB)
LINE OUT

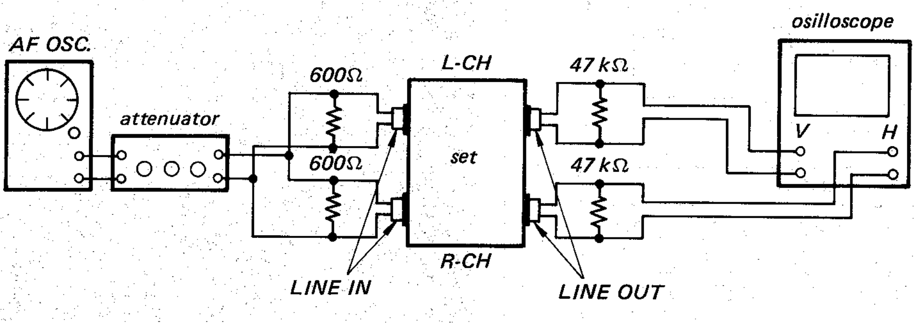
Adjustment Location:

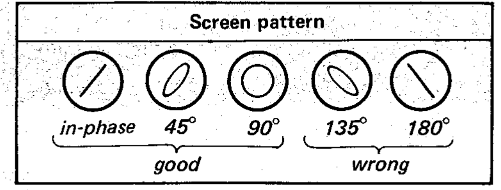

adjustment screw

1. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.


L-CH peak
output level
within 0.5 dB
within 0.5 dB
R-CH peak
Screw position
L-CH peak
R-CH peak
angle

2. Phase Check


AF OSC.
attenuator
600Ω
600Ω
L-CH
set
R-CH
47 kΩ
47 kΩ
osilloscope
V
H
LINE IN
LINE OUT


Screen pattern
in-phase
45°
90°
135°
180°
good
wrong

Adjust the screw so that L-CH and R-CH are in phase.

Specification:

Phase difference between L-CH and R-CH: less than 90°
Level difference between L-CH and R-CH: less than 1 dB

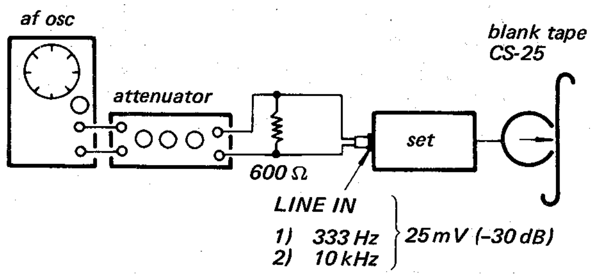
Record Bias Adjustment

Setting:

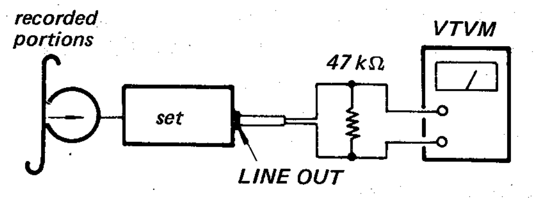
REC LEVEL control: standard record (See page 23)

Procedure:

1. Mode: record


af osc
attenuator
blank tape CS-25
set
600 Ω
LINE IN
1) 333 Hz
2) 10 kHz
25 mV (-30 dB)

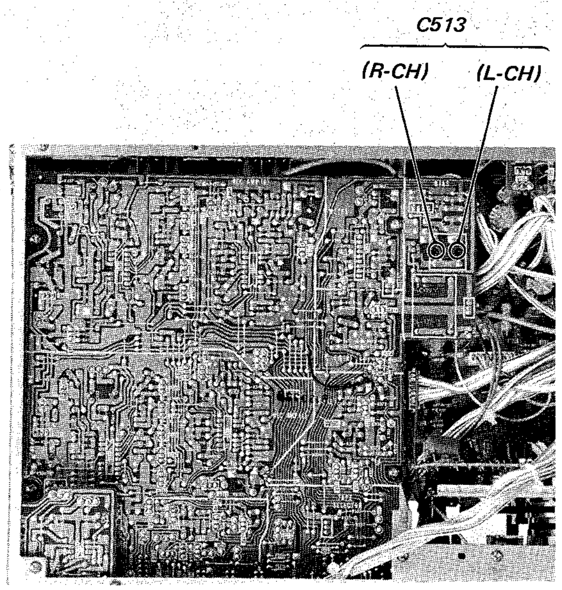
2. Mode: playback


recorded portions
VTVM
47 kΩ
set
LINE OUT

Adjust C513 (L-CH), (R-CH) so that the LINE OUT level of 333 Hz signal is 0 dB relative to that of 10 kHz.

Adjustment Location:

– record board –


C513
(R-CH)
(L-CH)

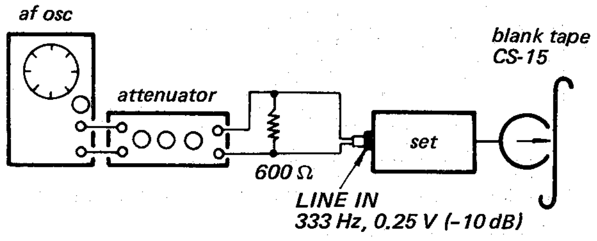
Record Level Adjustment

Setting:

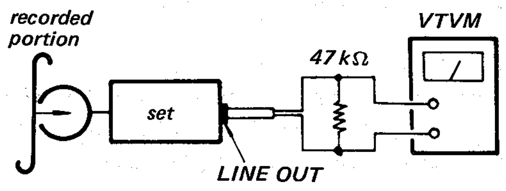
standard record (See page 23)

Procedure:

1. Mode: record


af osc
attenuator
blank tape CS-15
set
600 Ω
LINE IN
333 Hz, 0.25 V (-10 dB)

2. Mode: playback

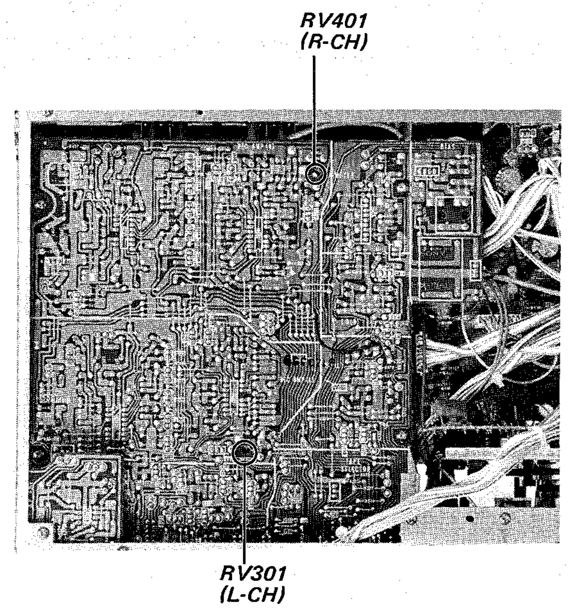

recorded portions
VTVM
47 kΩ
set
LINE OUT

Specification:

LINE OUT level: 0.41 ~ 0.46 V
(-5.5 ~ -4.5 dB)

Adjustment Location:

– record board –


RV401
(R-CH)
RV301
(L-CH)

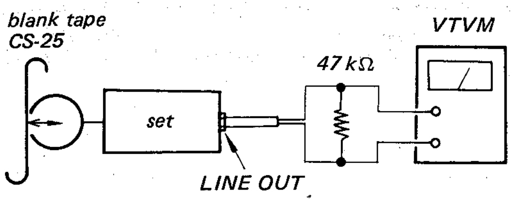
Bias Trap Adjustment

Setting:

MONITOR: TAPE
TAPE: TYPE IV

Procedure:

1. record and playback mode


blank tape
CS-25
VTVM
47 kΩ
set
LINE OUT

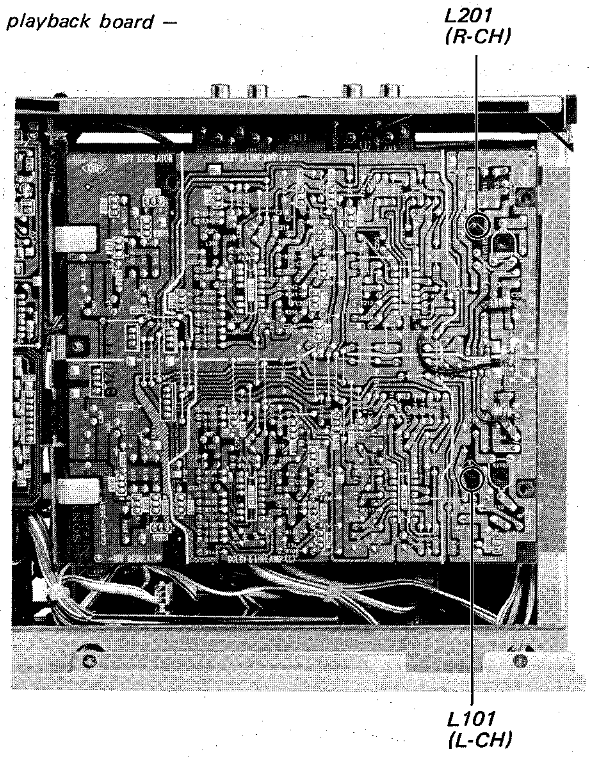
In record and forward mode, adjust L101 (L-CH), L201 (R-CH) so that the LINE OUT level is minimum on the VTVM.

Specification:

LINE OUT level: less than 4.4 mV (–45 dB)

Adjustment Location:

– playback board –


L201
(R-CH)
L101
(L-CH)

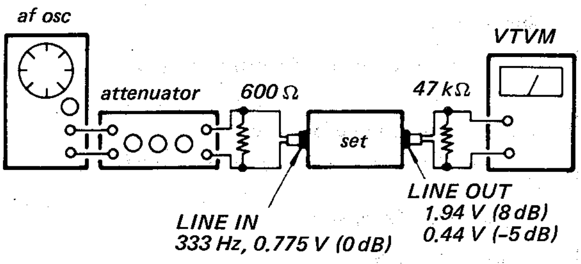
Level Meter Calibration

Setting:

MONITOR: SOURCE

Procedure:

1. Mode: record

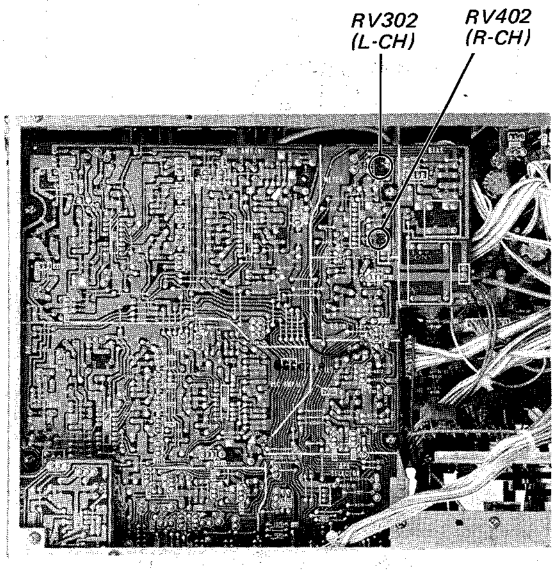

af osc
attenuator
600 Ω
47 kΩ
VTVM
set
LINE IN
333 Hz, 0.775 V (0 dB)
LINE OUT
1.94 V (8 dB)
0.44 V (-5 dB)

1. Set the REC LEVEL control so that the LINE OUT level is -5 dB.
2. Adjust RV302 (L-CH) and RV402 (R-CH) so that the LEDs including -4 dB (right-most element) light up.
3. Set the REC LEVEL control so that the LINE OUT level is +8 dB.
   Make sure the LED meter indicates -4 dB (0 VU) in this time.

Note: Slide the REC LEVEL control rightward slowly. (Be careful to peakhold indication.)

Adjustment Location:

– record board –


RV302
(L-CH)
RV402
(R-CH)

DOLBY C Level Adjustment

Setting:

MONITOR: TAPE
TAPE: TYPE I

1. Set DOLBY switch to DOLBY C. Adjust for the specification.

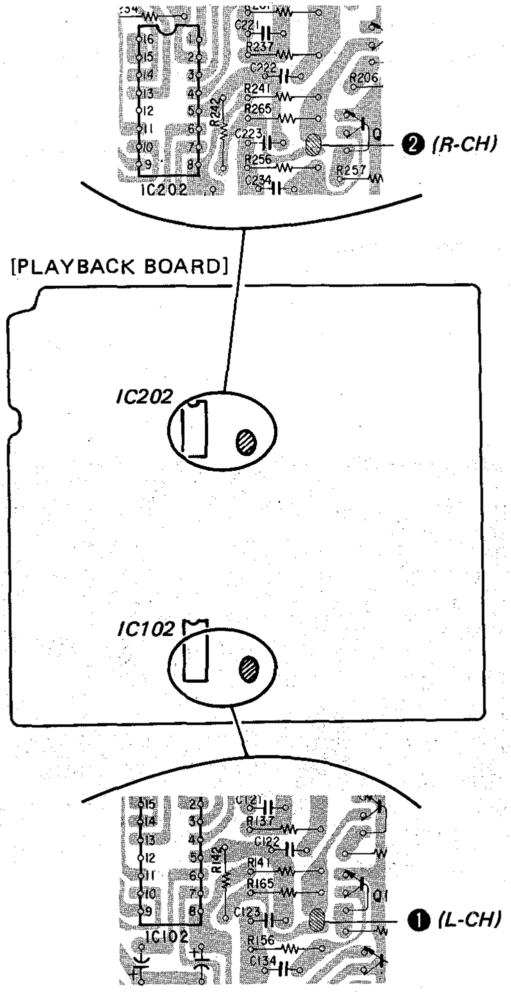
Specification:

- LINE OUT level: 55 mV ~ 35 mV (-23 dB ~ -27 dB)
- Level difference between L-CH and R-CH: less than 2 dB

Adjustment Location:

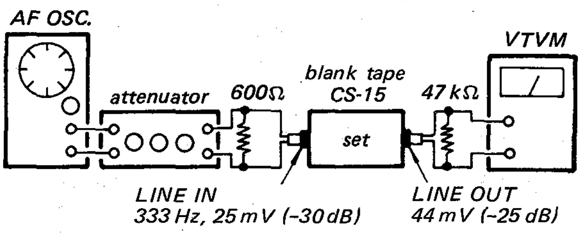
– playback board –

If LINE OUT level is higher than the specification, unsolder the portion marked by ❶ (L-CH), ❷ (R-CH).


❷ (R-CH)
C221
R237
C222
R241
R265
C223
R256
C234
R257
R206
R242
IC202
[PLAYBACK BOARD]
IC202
IC102
C121
R137
C122
R141
R165
C123
R156
C134
R142
Q1
IC102
❶ (L-CH)

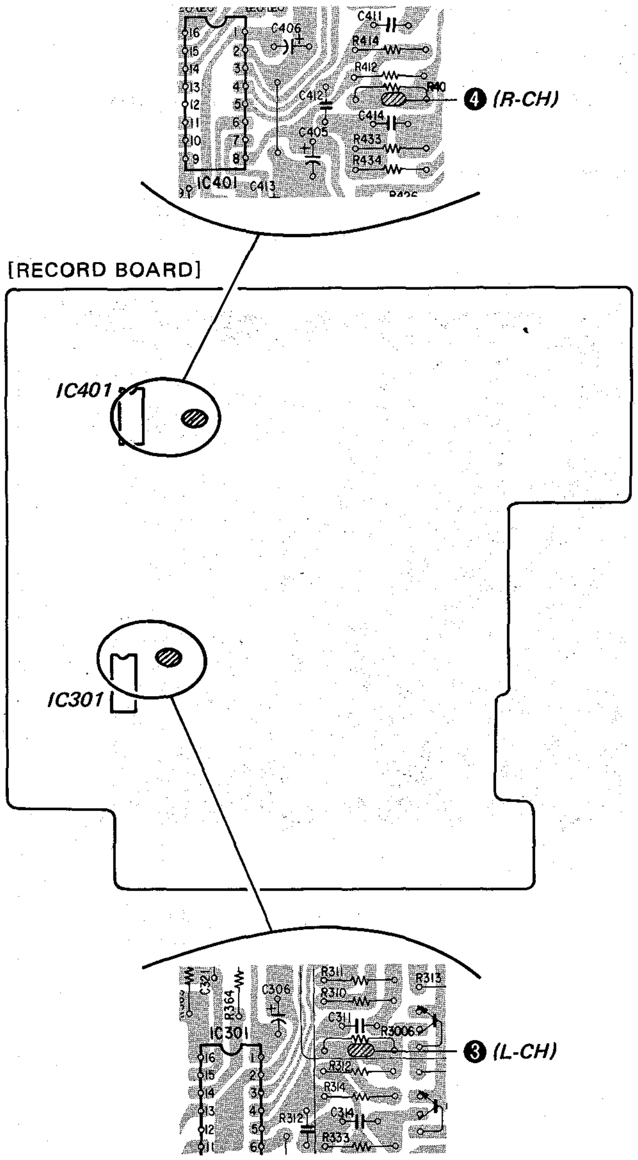
Procedure:

record and playback mode

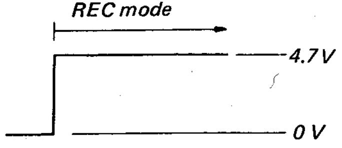
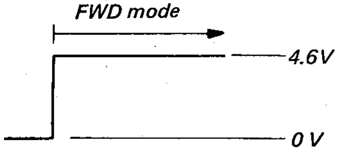
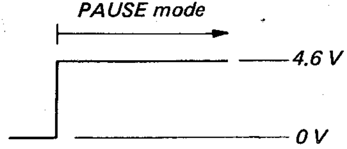
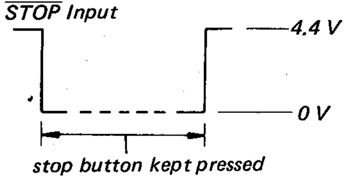
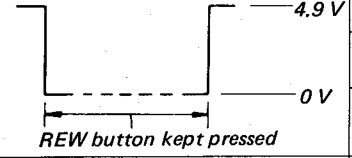
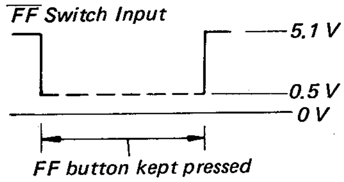
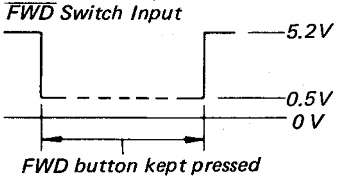
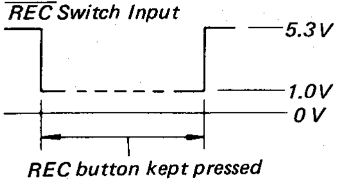
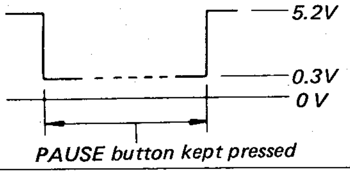

AF OSC.
attenuator
600Ω
blank tape
CS-15
set
47 kΩ
VTVM
LINE IN
333 Hz, 25 mV (-30 dB)
LINE OUT
44 mV (-25 dB)

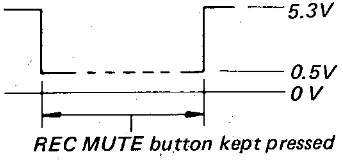
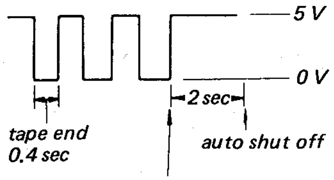
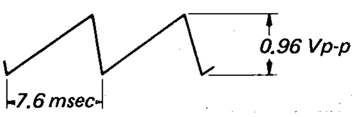
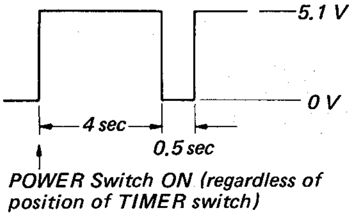
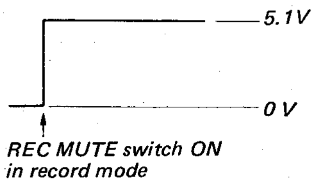
– record board –

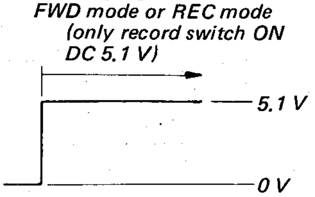
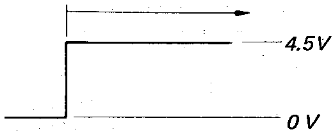
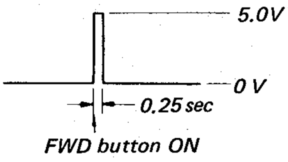
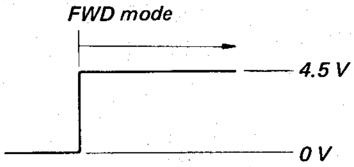
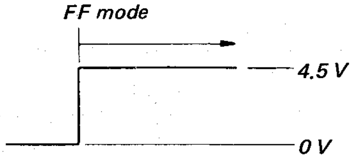
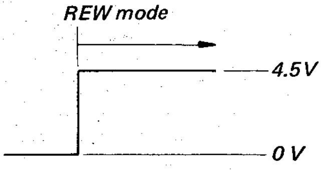
If LINE OUT level is lower than the specification, unsolder the portion marked by ❸ (L-CH), ❹ (R-CH).


C411
C406
R414
R412
C412
R410
C414
C405
R433
R434
IC401
C413
❹ (R-CH)
[RECORD BOARD]
IC401
IC301
C301
R364
C306
R311
R310
R313
C311
R3006
R312
R314
C314
R333
IC301
❸ (L-CH)

IC601's Terminal Name, Waveform and/or Voltages

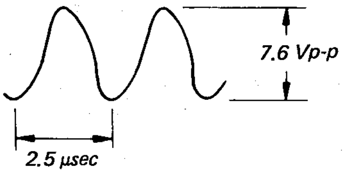
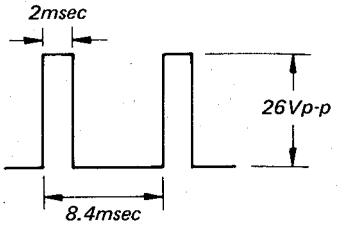
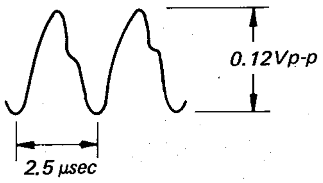
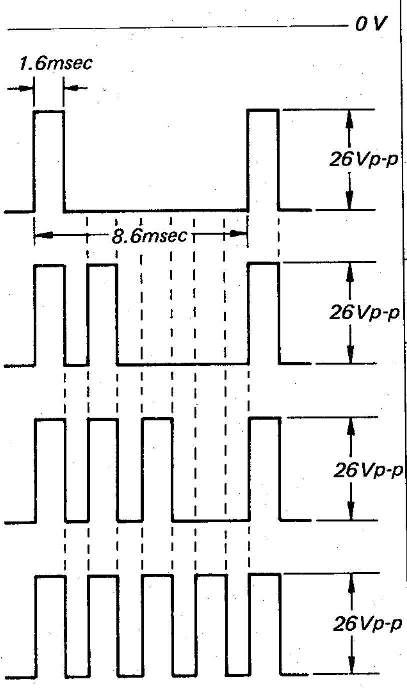
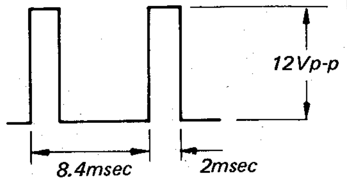
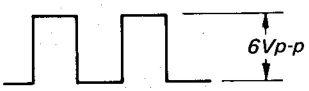
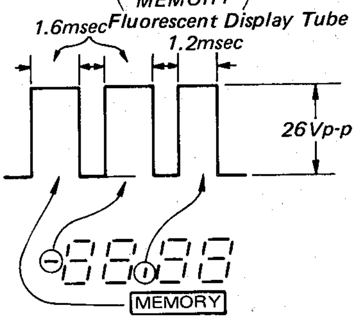
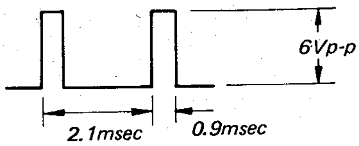
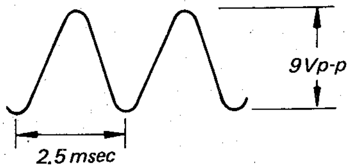
Pin No.	Waveform and/or Voltages
①	*REC lamp Drive Signal*  REC mode 4.7 V 0 V
②	*FWD Lamp Drive Signal*  FWD mode 4.6V 0 V
③	*PAUSE Lamp Drive Signal*  PAUSE mode 4.6 V 0 V
④	*$\overline{\text{STOP}}$ Input*  4.4 V 0 V stop button kept pressed
⑤	*$\overline{\text{REW}}$ Switch Input*  4.9 V 0 V REW button kept pressed
⑥	*$\overline{\text{FF}}$ Switch Input*  5.1 V 0.5 V 0 V FF button kept pressed
⑦	*$\overline{\text{FWD}}$ Switch Input*  5.2V 0.5V 0 V FWD button kept pressed
⑧	*$\overline{\text{REC}}$ Switch Input*  5.3V 1.0V 0 V REC button kept pressed
⑨	*$\overline{\text{PAUSE}}$ Switch Input*  5.2V 0.3V 0 V PAUSE button kept pressed

Pin No.	Waveform and/or Voltages
⑩	*REC MUTE Switch Input*  5.3V 0.5V 0 V REC MUTE button kept pressed
⑪	*Auto Shut-Off Signal*  5 V 0 V 2 sec tape end 0.4 sec auto shut off *becomes in stop mode at tape end in forward mode. (may become in 0 V according to the position of take-up reel spindle.)*
⑫	*Tape Counter Input DC 5.2V*
⑬	*Clock Signal*  0.96 Vp-p 7.6 msec
⑭	*GND 0 V*
⑮	*(not used in this set)*
⑯	*(not used in this set)*
⑰	*Timer Signal (TIMER)*  5.1 V 0 V 4 sec 0.5 sec POWER Switch ON (regardless of position of TIMER switch)
⑱	*$\overline{\text{Reset}}$ Signal (RESET) DC 4.4V*
⑲	*Record-Muting Signal*  5.1V 0 V REC MUTE switch ON in record mode
⑳	*(not used in this set)*

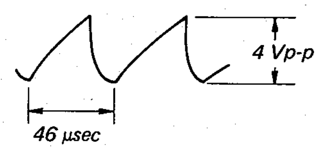
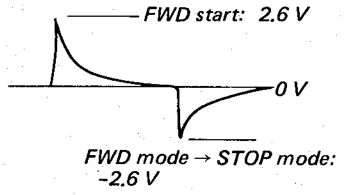
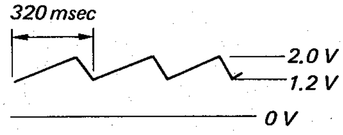
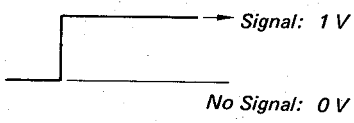
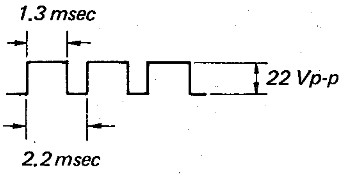
Pin No.	Waveform and/or Voltages
㉑	*Line-Muting Signal*  FWD mode or REC mode (only record switch ON DC 5.1 V) 5.1 V 0 V
㉒	*(not used in this set)*
㉓	*Head-Solenoid Drive Signal*  FWD mode 4.5V 0 V
㉔	*AMS Solenoid Drive Signal*  5.0V 0 V 0.25 sec FWD button ON
㉕	*Reel-Motor Drive Signal in Forward Mode*  FWD mode 4.5 V 0 V
㉖	*Reel-Motor Drive Signal in Fast-Forward Mode*  FF mode 4.5 V 0 V
㉗	*Reel-Motor Drive Signal in Rewind Mode*  REW mode 4.5V 0 V
㉘	*B + Supply Voltage DC 6V*

Note: Voltages are measured with an oscilloscope (10 MΩ probe). So readings are different from the mounting diagram and schematic diagram measured with a VOM.

IC802's Terminal Name, Waveform and/or Voltages

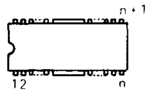
Pin No.	Waveform and/or Voltages	Pin No.	Waveform and/or Voltages	Pin No.	Waveform and/or Voltages
①	*Clock Signal*  	③,④	*FF Mode* *Capstan Motor Drive Signal* *STOP mode: DC 24.5V* *FWD mode: DC 13.5V* *FF Mode: DC 0V*	⑯ ⑰ ⑱ ⑲	*Drive Signal for Grids G1 through G4 of Fluorescent Display Tube* 
②	*Reel Motor Drive Signal in Rewind Mode* *STOP mode: DC24.5V* *REW mode: DC13.5V*	⑤	*Counter "0" Output*  	⑳	*B + Supply Voltage* *DC 26V*
⑥	*Drive Signal for "a" Segment of Fluorescent Display Tube.* *1) In case of all "a" segments are not lit, i.e., all of the four digits are "1" or "4".* *2) In case of only one out of four "a" segments lit, i.e., one of the four digits is "0", "2", "3", "5", "6", "7", "8", or "9" and all others are "1" or "4".* *3) In case of only two out of four "a" segments lit as in the case of 2) above.* *4) In case of only three out of four "a" segments lit as in the case of 2) above.* *5) In case of all of the four "a" segments lit likewise.*  0 V 1.6msec 26Vp-p 8.6msec 26Vp-p 26Vp-p 26Vp-p			㉑	*Drive Signal for "MEMORY" of Fluorescent Display Tube* 
				㉒	*B + Supply Voltage* *DC 26V*
				㉓ (φ2) ㉔ (φ1)	*φ1 or φ2 – Signal Input from Photo Transistors fast forward and rewind modes:*  *Pulse width varies according to tape take-up. (Stop mode: 10.6 V DC or 0 V according to the position of photo transistors)*
⑦	*Drive Signal for "b" Segments of Fluorescent Dsiplay Tube same as pin ⑥ for Segment "a".*	⑬	*Drive Signal ("DP"(dot) "–"(minus) "MEMORY") of Fluorescent Display Tube*  	㉕	*1.5 kHz Clock Signal (INT)* 
⑧	*Drive Signal for "c" Segments of Fluorescent Display Tube same as pin ⑥ for Segment "a".*			㉖	*RESET Signal* *13.5V*
⑨	*Drive Signal for "d" Segments of Fluorescent Display Tube same as pin ⑥ for Segment "a".*			㉗	*GND (Ground)* *12.5V*
⑩	*Drive Signal for "e" Segments of Fluorescent Display Tube same as pin ⑥ for Segment "a".*			㉘	*Clock Signal* 
⑪	*Drive Signal for "f" Segments of Fluorescent Display Tube same as pin ⑥ for Segment "a".*	⑭	*B + Supply voltage* *26V*		
⑫	*Drive Signal for "g" Segments of Fluorescent Display Tube same as pin ⑥ for Segment "a".*	⑮	*TEST Terminal* *26V*		

IC801's Terminal Name, Waveform and/or Voltages

Pin No.	Waveform and/or Voltages	Pin No.	Waveform and/or Voltages	Pin No.	Waveform and/or Voltages
①	*"B2" (dot) Drive signal* *R and L channel signal: 20.5 V* *R or L channel signal: 10.5 V*	⑯	*(not used in this set)*	㉖	*R-CH Grid Control Output Signal* *Same as* ㉕
②	*"B3" (dot) Drive Signal* *Same as* ①	⑰	*GND 0 V*		
③	*"B4" (dot) Drive Signal* *Same as* ①	⑱	*(not used in this set)*	㉗	*B+ Supply Voltage: 6 V*
④	*"B5" (dot) Drive Signal* *Same as* ①	⑲	*Clock Signal*  4 Vp-p 46 µsec	㉘	*B+ Supply Voltage: 22 V*
⑤	*"B6" (dot) Drive Signal* *Same as* ①				
⑥	*"B7" (dot) Drive Signal* *Same as* ①	⑳	*Mute Signal*  FWD start: 2.6 V 0 V FWD mode → STOP mode: -2.6 V		
⑦	*"B8" (dot) Drive Signal* *Same as* ①				
⑧	*"B9" (dot) Drive Signal* *Same as* ①	㉑	*(not used in this set)*		
⑨	*"B10" (dot) Drive Signal* *Same as* ①	㉒	*MEMORY RESET Input Signal*  320 msec 2.0 V 1.2 V 0 V		
⑩	*"B11" (dot) Drive Signal* *Same as* ①				
⑪	*"B12" (dot) Drive Signal* *Same as* ①	㉓	*R-CH Signal Input*  Signal: 1 V No Signal: 0 V		
⑫	*"B13" (dot) Drive Signal* *Same as* ①				
⑬	*"B14" (dot) Drive Signal* *Same as* ①	㉔	*L-CH Signal Input* *Same as* ㉓		
⑭	*"B15" (dot) Drive Signal* *Same as* ①	㉕	*L-CH Grid Control Output Signal*  1.3 msec 22 Vp-p 2.2 msec		
⑮	*"B16" (dot) Drive Signal* *Same as* ①				

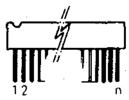
Semiconductor Lead Layouts

CX-174
NJM2043D-D
μPC4557C
MSM58361RS
μPC339C
MB84069B
MSL9359RS
μPD554C089
NJM4558D-FA
NJM2903D

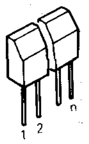


(Top view)

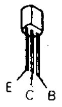
BA6138



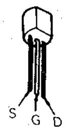
CX-069A



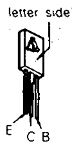
2SC1364
2SC1364-8
2SC1345
2SC2001
2SD1152
2SA844
2SC945-Q
2SC1815
2SB864



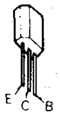
2SK30A-O



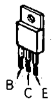
2SB731
2SD809


letter side
E
C
B

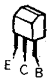
2SA1027R
2SA1026-7



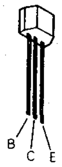
2SD880



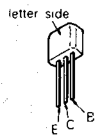
2SD774
2SB734



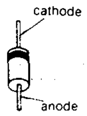
2SB808



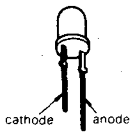
2SD1020


letter side
E
C
B

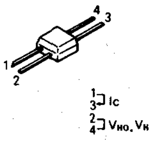
HZ6B1L
1S1555
10E-2
EQA01-08RI
HZ22-3L
HZ27-IL
RD7.5J-N1
HZ9A2L
HZ12C3L


cathode
anode

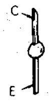
SLR-34UR5
SLR-34PG5
SLR-34DU5


cathode
anode

THS102

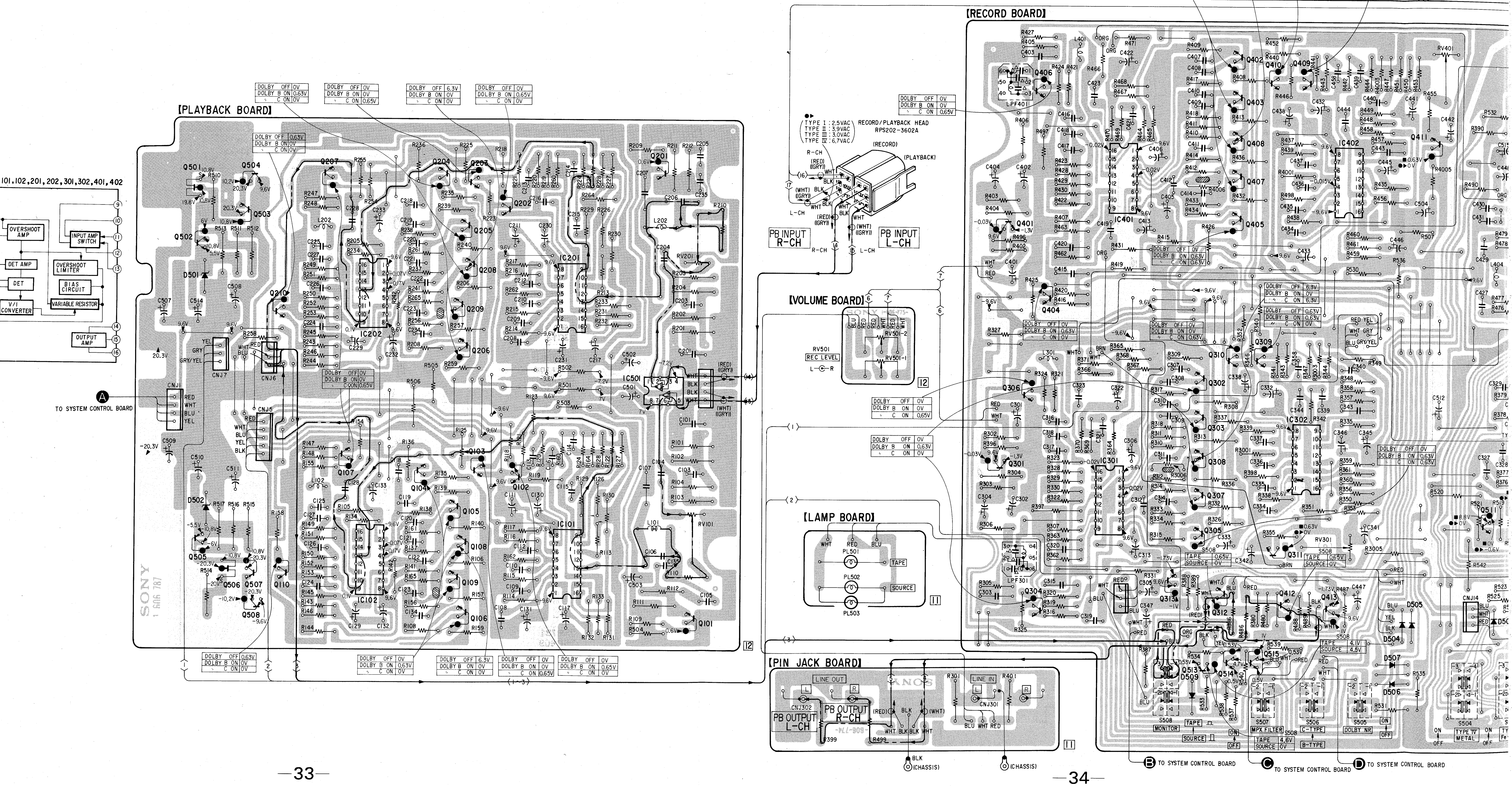

4
3
1
2
1 3 Ic
2 4 VHO, VH

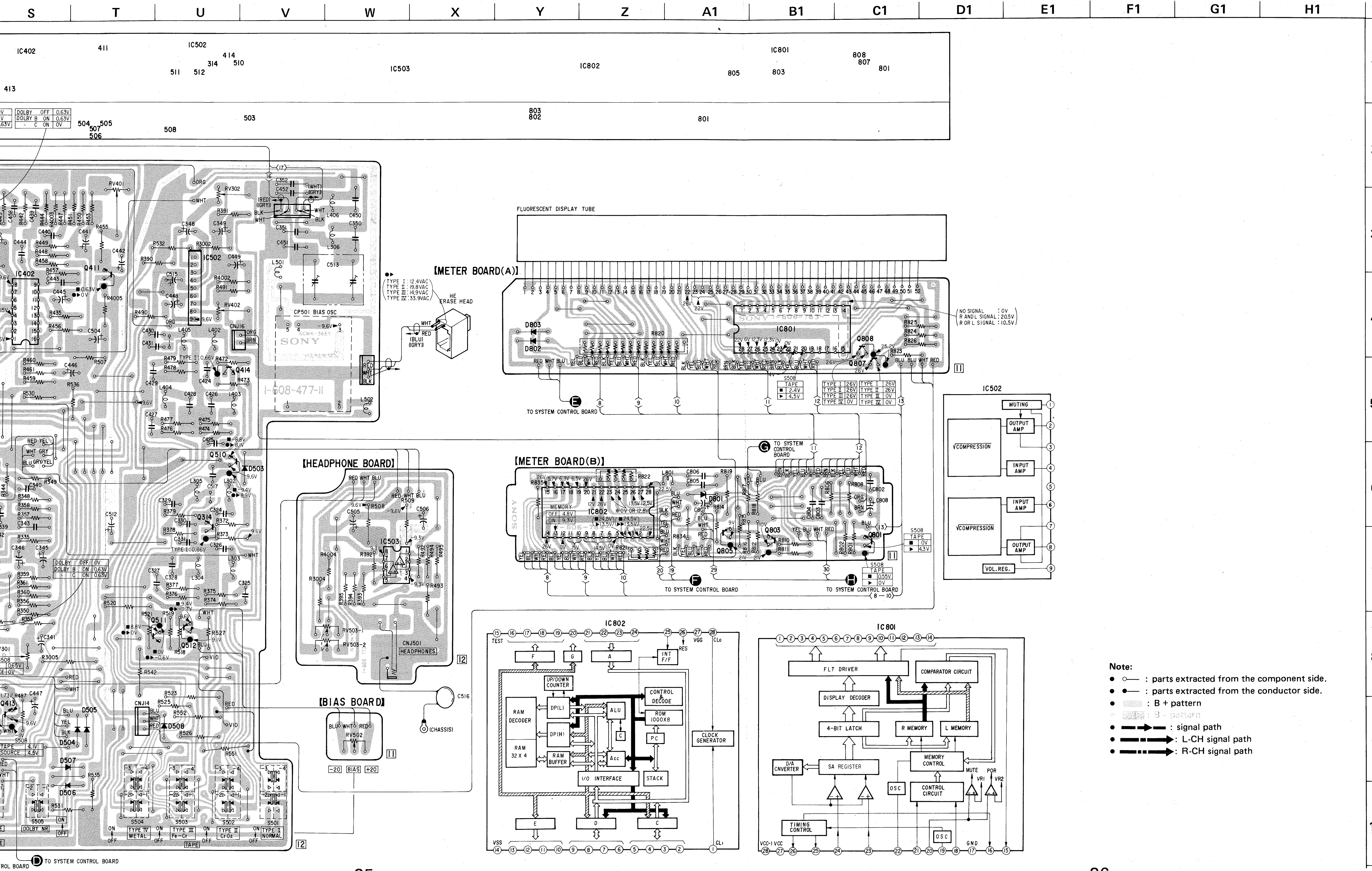
PH102



SECTION 4
DIAGRAMS

	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
Q IC			501 502 505	504 503 210 506 507 508 110	207 IC202 107 IC102	204 203 205 208 209 206 103 104 105 108 109 106	202 102 IC201 IC101	201 IC501	101			406 401 306 301	404 304 IC401 IC301	313 302 303 308 307 305	402 403 408 407 405 310 410 409 309 312 513 514 515 311 412	IC402 IC302 413	411	51
D			501 502											509			504 507 505 506	508


DOLBY OFF 0V
DOLBY B ON 0.63V
C ON 0V
DOLBY OFF 6.3V
DOLBY B ON 0V
C ON 6.3V
DOLBY OFF 0V
DOLBY B ON 0V
C ON 0.63V
DOLBY OFF 0.63V
DOLBY B ON 0.63V
C ON 0V
DOLBY B ON 0.65V
【PLAYBACK BOARD】
【RECORD BOARD】
【VOLUME BOARD】
【LAMP BOARD】
【PIN JACK BOARD】
101,102,201,202,301,302,401,402
OVERSHOOT AMP
INPUT AMP SWITCH
DET AMP
OVERSHOOT LIMITER
DET
BIAS CIRCUIT
V/I CONVERTER
VARIABLE RESISTOR
OUTPUT AMP
TO SYSTEM CONTROL BOARD
TYPE I : 2.5VAC
TYPE II : 3.9VAC
TYPE III : 3.0VAC
TYPE IV : 6.7VAC
RECORD/PLAYBACK HEAD
RPS202-3602A
(RECORD)
(PLAYBACK)
R-CH
L-CH
PB INPUT R-CH
PB INPUT L-CH
RV501
REC LEVEL
L-C-R
PL501
PL502
PL503
TAPE
SOURCE
LINE OUT
LINE IN
CNJ302
CNJ301
PB OUTPUT L-CH
PB OUTPUT R-CH
BLK (CHASSIS)
(CHASSIS)
S508 MONITOR
TAPE
SOURCE
S507 MPX FILTER
ON
OFF
S506 C-TYPE
B-TYPE
S505 DOLBY NR
S504 TYPE IV METAL
IC501
IC201
IC202
IC101
IC102
IC401
IC402
IC301
IC302
LPF401
LPF301
CNJ1
CNJ5
CNJ6
CNJ7
CNJ14
SONY
11
12

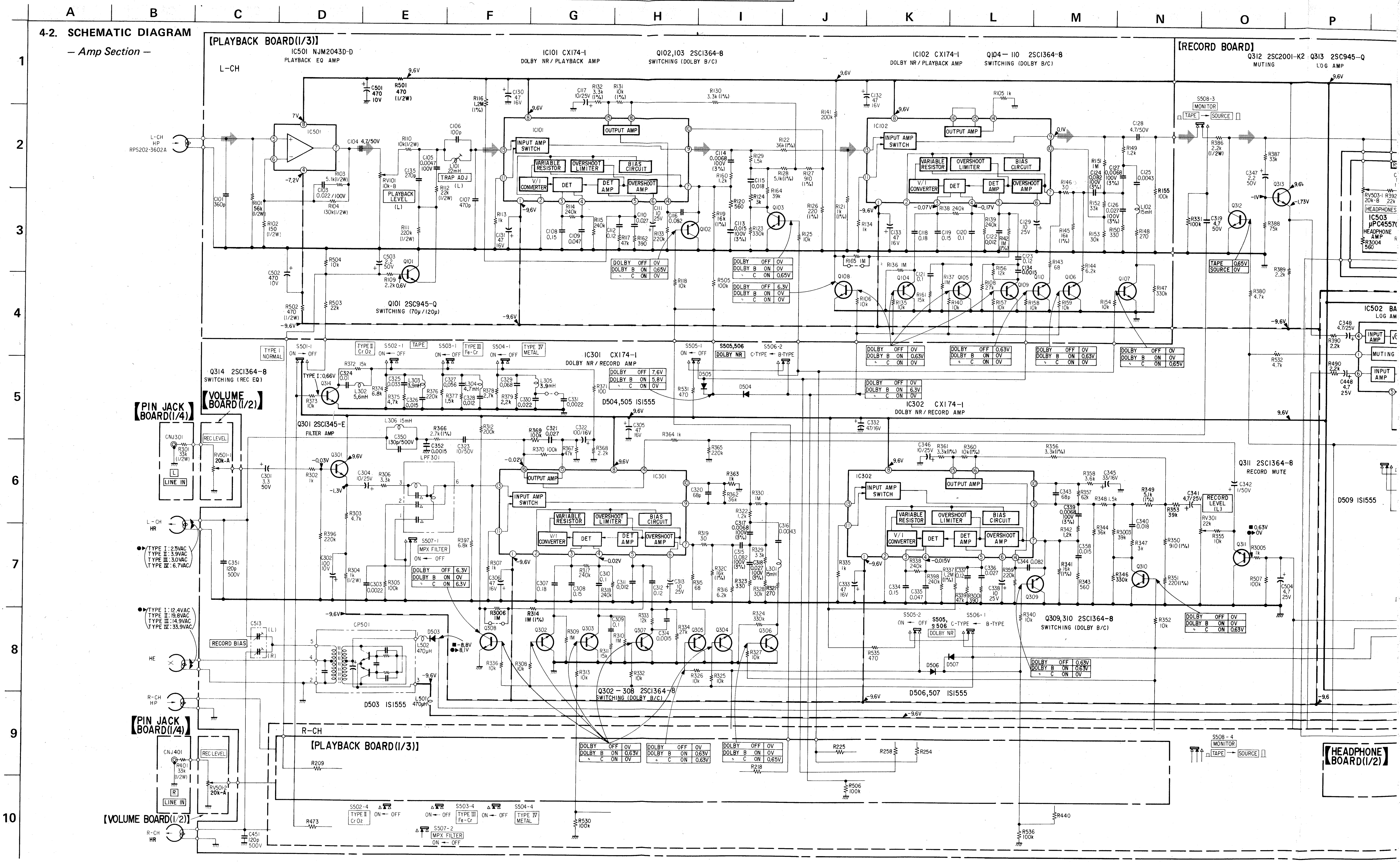

S T U V W X Y Z A1 B1 C1 D1 E1 F1 G1 H1
1 2 3 4 5 6 7 8 9 10
IC402
IC502
IC503
IC802
IC801
FLUORESCENT DISPLAY TUBE
[METER BOARD(A)]
[METER BOARD(B)]
[HEADPHONE BOARD]
[BIAS BOARD]
CP501 BIAS OSC
HE ERASE HEAD
TO SYSTEM CONTROL BOARD
NO SIGNAL : 0V
R AND L SIGNAL : 20.5V
R OR L SIGNAL : 10.5V
TYPE I : 12.4VAC
TYPE II : 19.8VAC
TYPE III : 14.9VAC
TYPE IV : 33.9VAC
DOLBY OFF 0V
DOLBY B ON 0.63V
C ON 0.63V
S505 DOLBY NR
S504 TYPE IV METAL
S503 TYPE III Fe-Cr
S502 TYPE II CrO2
S501 TYPE I NORMAL
TAPE
S508 TAPE
SOURCE
RV502
-20 BIAS +20
CNJ501 HEADPHONES
RV503-1
RV503-2
C516
(CHASSIS)
MUTING
OUTPUT AMP
√COMPRESSION
INPUT AMP
VOL.REG.
UP/DOWN COUNTER
RAM DECODER
RAM 32 X 4
DP(L)
DP(H)
RAM BUFFER
ALU
Acc
ROM 1000X8
CONTROL DECODE
PC
STACK
I/O INTERFACE
INT F/F
CLOCK GENERATOR
TEST
RES
VGG
VSS
FLT DRIVER
COMPARATOR CIRCUIT
DISPLAY DECODER
4-BIT LATCH
R MEMORY
L MEMORY
D/A CNVERTER
SA REGISTER
MEMORY CONTROL
OSC
CONTROL CIRCUIT
TIMING CONTROL
MUTE
POR
VRI
VR2
VCC-I VCC
GND

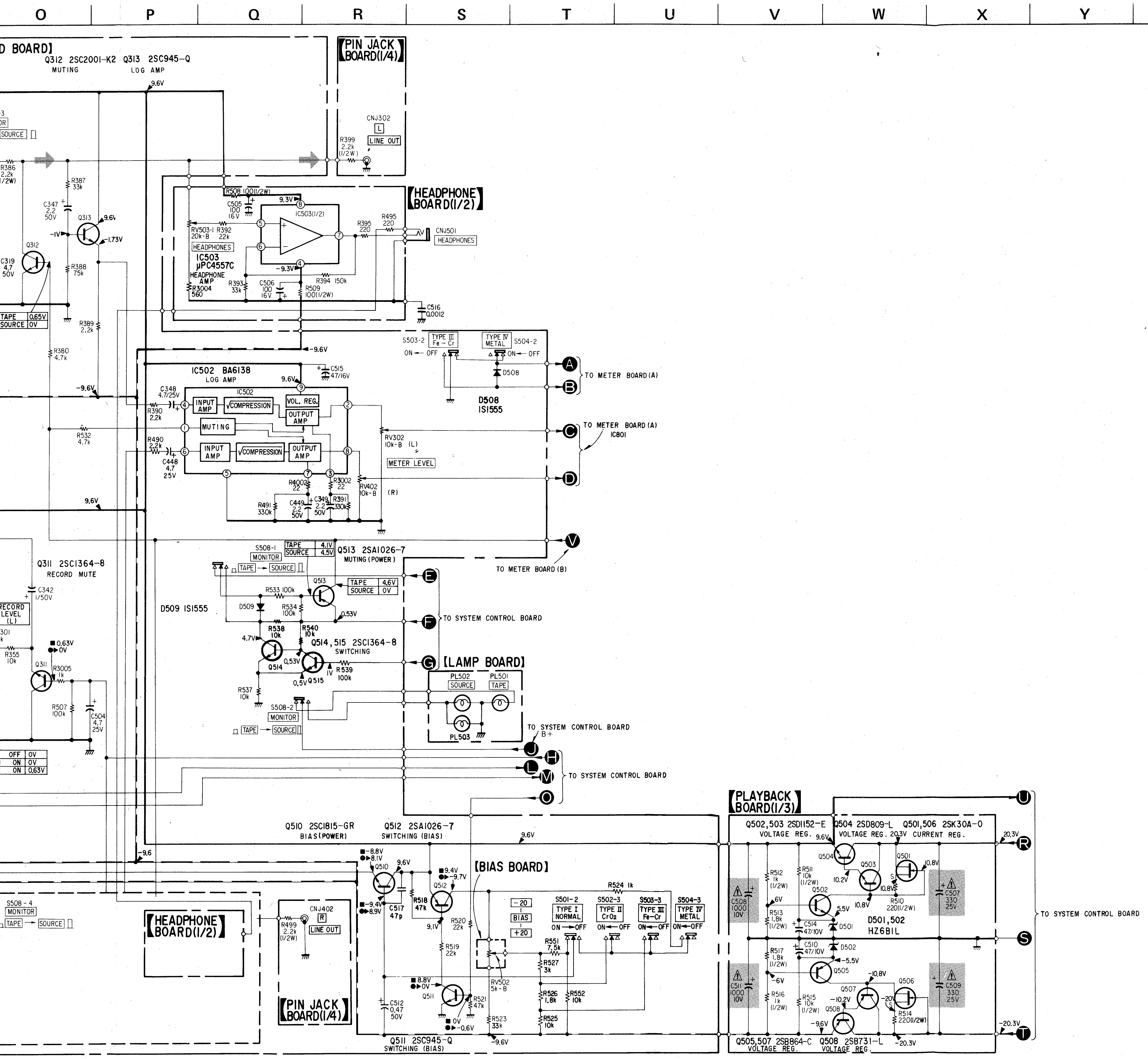
Note:

- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- ▨ : B + pattern
- ▨ : B − pattern
- ━━➡━━ : signal path
- ━━━━➡ : L-CH signal path
- ━━·━━➡ : R-CH signal path

4-2. SCHEMATIC DIAGRAM

— Amp Section —


A B C D E F G H I J K L M N O P
1 2 3 4 5 6 7 8 9 10
[PLAYBACK BOARD(1/3)]
L-CH
IC501 NJM2043D-D
PLAYBACK EQ AMP
IC101 CX174-1
DOLBY NR/PLAYBACK AMP
Q102,103 2SC1364-8
SWITCHING (DOLBY B/C)
IC102 CX174-1
DOLBY NR/PLAYBACK AMP
Q104-110 2SC1364-8
SWITCHING (DOLBY B/C)
[RECORD BOARD]
Q312 2SC2001-K2
MUTING
Q313 2SC945-Q
LOG AMP
L-CH HP RPS202-3602A
PLAYBACK LEVEL (L)
TRAP ADJ (L)
Q101 2SC945-Q
SWITCHING (70μ/120μ)
INPUT AMP SWITCH
OUTPUT AMP
VARIABLE RESISTOR
OVERSHOOT LIMITER
BIAS CIRCUIT
V/I CONVERTER
DET
DET AMP
OVERSHOOT AMP
DOLBY OFF 0V
DOLBY B ON 0.65V
C ON 0V
S508-3 MONITOR
TAPE SOURCE
IC503 μPC4557C
HEADPHONE AMP
IC502
LOG AMP
INPUT AMP
MUTING
Q314 2SC1364-8
SWITCHING (REC EQ)
[PIN JACK BOARD(1/4)]
[VOLUME BOARD(1/2)]
CNJ301
LINE IN
REC LEVEL
RV501-1 20k-A
S501-1 TYPE I NORMAL
S502-1 TYPE II CrO2
S503-1 TYPE III Fe-Cr
S504-1 TYPE IV METAL
IC301 CX174-1
DOLBY NR/RECORD AMP
D504,505 1S1555
S505,506
C-TYPE B-TYPE
IC302 CX174-1
DOLBY NR/RECORD AMP
Q301 2SC1345-E
FILTER AMP
LPF301
S507-1 MPX FILTER
Q311 2SC1364-8
RECORD MUTE
RECORD LEVEL (L)
D509 1S1555
L-CH HR
TYPE I: 2.5VAC
TYPE II: 3.9VAC
TYPE III: 3.0VAC
TYPE IV: 6.7VAC
TYPE I: 12.4VAC
TYPE II: 19.8VAC
TYPE III: 14.9VAC
TYPE IV: 33.9VAC
RECORD BIAS
HE
CP501
D503 1S1555
Q302-308 2SC1364-8
SWITCHING (DOLBY B/C)
Q309,310 2SC1364-8
SWITCHING (DOLBY B/C)
D506,507 1S1555
R-CH HP
R-CH
[PLAYBACK BOARD(1/3)]
CNJ401
RV501-2 20k-A
S502-4 TYPE II CrO2
S503-4 TYPE III Fe-Cr
S504-4 TYPE IV METAL
S507-2 MPX FILTER
S508-4 MONITOR
[HEADPHONE BOARD(1/2)]
R-CH HR


O P Q R S T U V W X Y
D BOARD]
Q312 2SC2001-K2 MUTING
Q313 2SC945-Q LOG AMP
[PIN JACK BOARD(1/4)]
CNJ302
LINE OUT
R399 2.2k (1/2W)
[HEADPHONE BOARD(1/2)]
IC503 µPC4557C HEADPHONE AMP
CNJ501 HEADPHONES
RV503-1 20k-B
R508 100(1/2W)
C516 0.0012
S503-2 TYPE III Fe-Cr
S504-2 TYPE IV METAL
D508 1S1555
TO METER BOARD (A)
TO METER BOARD (A) IC801
IC502 BA6138 LOG AMP
INPUT AMP
√COMPRESSION
VOL. REG.
OUTPUT AMP
MUTING
RV302 10k-B (L)
METER LEVEL
RV402 10k-B (R)
TO METER BOARD (B)
Q311 2SC1364-8 RECORD MUTE
RECORD LEVEL (L)
S508-1 MONITOR
TAPE SOURCE
Q513 2SA1026-7 MUTING (POWER)
D509 1S1555
TO SYSTEM CONTROL BOARD
Q514, 515 2SC1364-8 SWITCHING
[LAMP BOARD]
PL502 SOURCE
PL501 TAPE
PL503
S508-2 MONITOR
TO SYSTEM CONTROL BOARD B+
TO SYSTEM CONTROL BOARD
S508-4 MONITOR
[HEADPHONE BOARD(1/2)]
CNJ402 R LINE OUT
[PIN JACK BOARD(1/4)]
Q510 2SC1815-GR BIAS(POWER)
Q512 2SA1026-7 SWITCHING (BIAS)
[BIAS BOARD]
S501-2 TYPE I NORMAL
S502-3 TYPE II CrO2
S503-3 TYPE III Fe-Cr
S504-3 TYPE IV METAL
RV502 5k-B
BIAS
Q511 2SC945-Q SWITCHING (BIAS)
[PLAYBACK BOARD(1/3)]
Q502,503 2SD1152-E VOLTAGE REG.
Q504 2SD809-L VOLTAGE REG.
Q501,506 2SK30A-O CURRENT REG.
D501,502 HZ6B1L
C507 330 25V
C509 330 25V
C508 1000 10V
C511 1000 10V
Q505,507 2SB864-C VOLTAGE REG.
Q508 2SB731-L VOLTAGE REG.
TO SYSTEM CONTROL BOARD

Note:
- ➡ : signal path
- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——: B+ bus.
- - - -: B- bus.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
- AC voltage readings in the bias oscillator with a VTVM.

Note: Voltages are measured with a VOM (50kΩ/V).

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

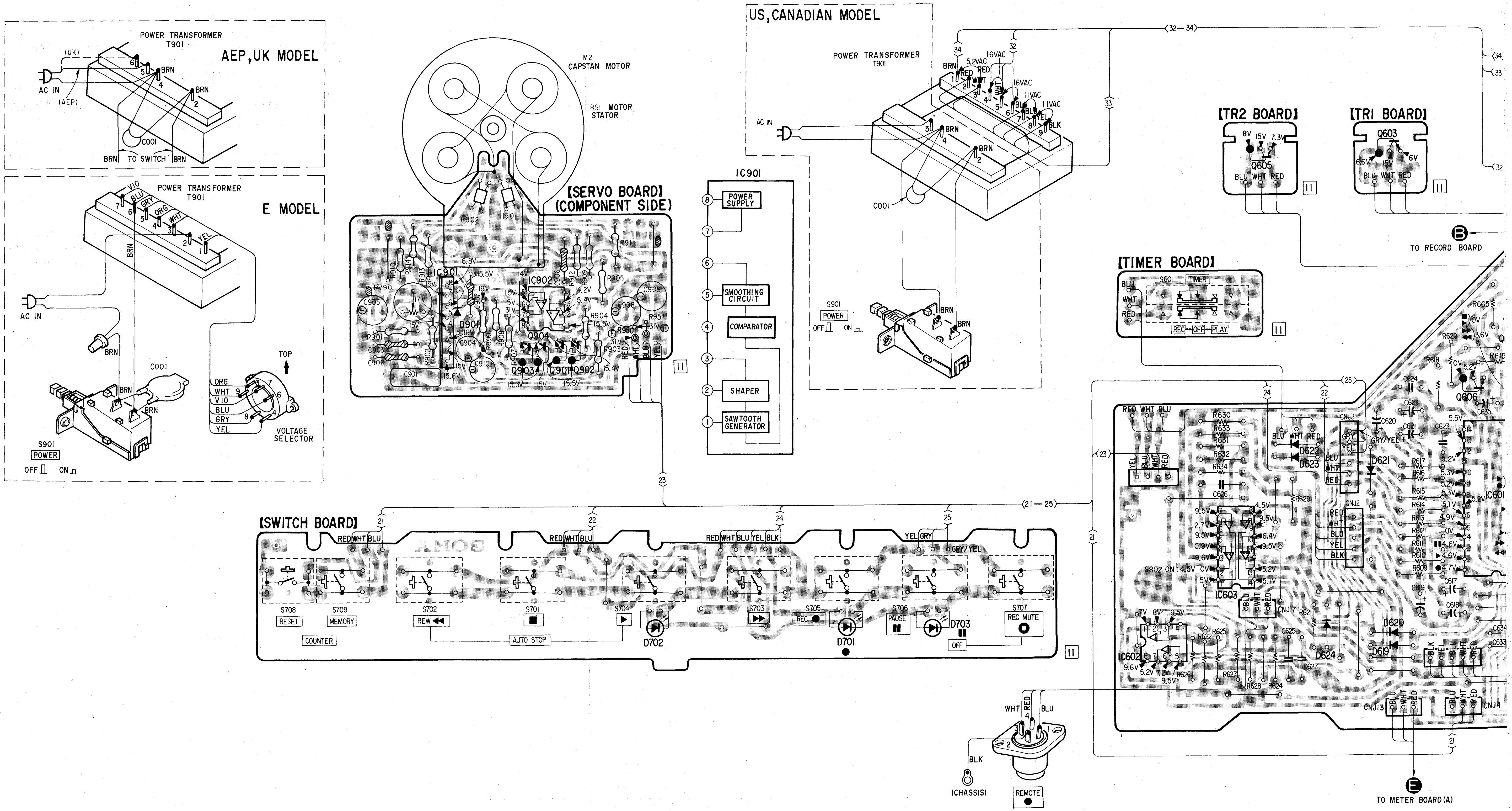
Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

4-3. MOUNTING DIAGRAM

– System Control Section –

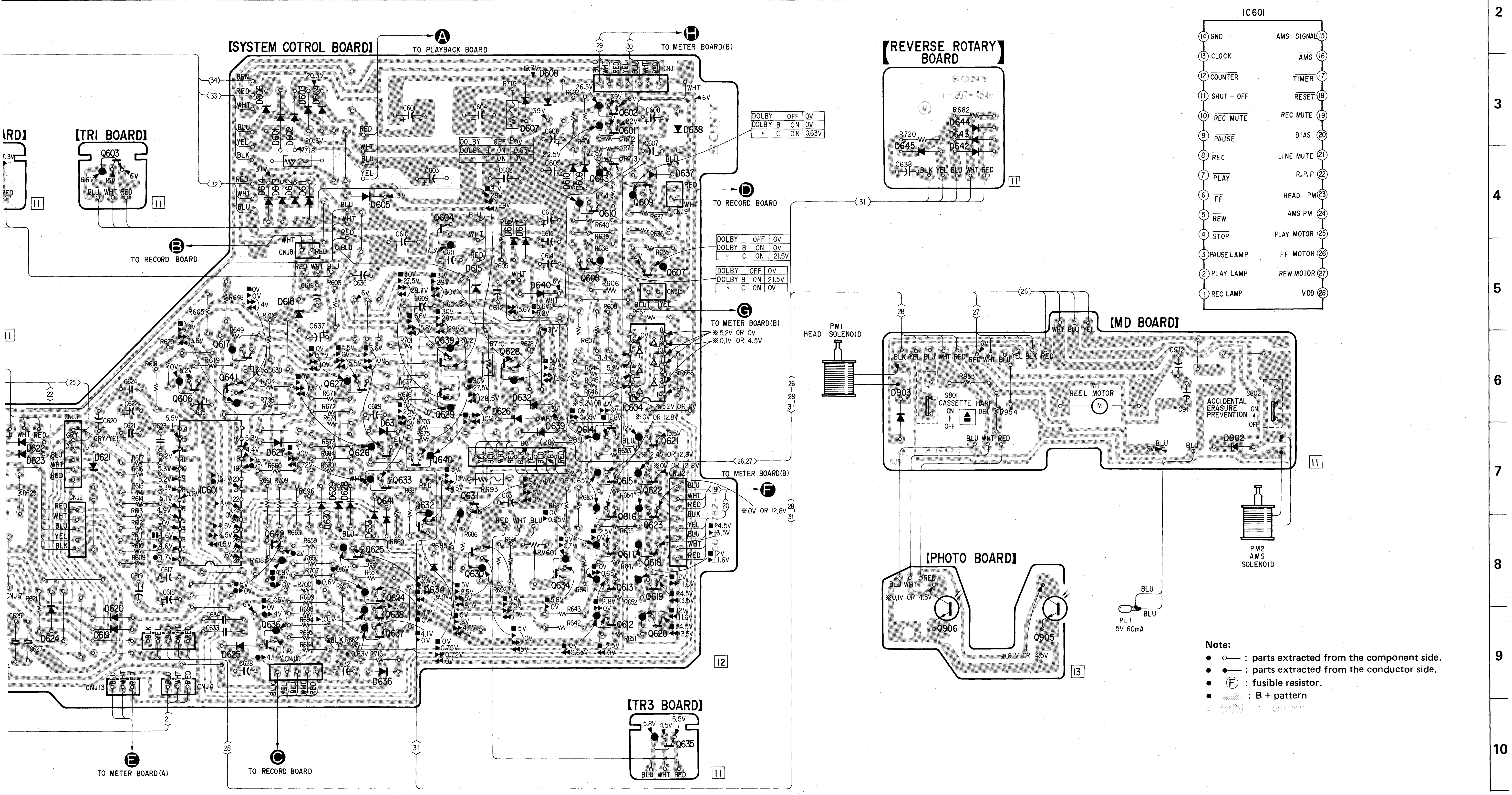
Note: See page 32 for semiconductor lead layouts.

	F	G	H	J	K	N	O	P
Q IC	IC901	IC902 903 904 901 902				IC602	605 IC603	603
D	901		702	701	703		622 623 624	621 620 619



POWER TRANSFORMER T901
AEP,UK MODEL
(UK)
(AEP)
AC IN
BRN
C001
TO SWITCH
E MODEL
V10
VIO
GRY
ORG
WHT
YEL
BLU
TOP
VOLTAGE SELECTOR
S901
POWER
OFF
ON
M2 CAPSTAN MOTOR
BSL MOTOR STATOR
H902
H901
[SERVO BOARD] (COMPONENT SIDE)
IC901
IC902
Q904
Q903
Q901
Q902
D901
RV901
R911
R905
R904
R951
R950
R903
C905
C908
C909
C910
C901
C902
C903
C904
16.8V
15.5V
15.6V
IC901
POWER SUPPLY
SMOOTHING CIRCUIT
COMPARATOR
SHAPER
SAWTOOTH GENERATOR
US,CANADIAN MODEL
16VAC
11VAC
5.2VAC
RED
BLK
[TR2 BOARD]
Q605
8V
15V
7.3V
[TR1 BOARD]
Q603
6.6V
6V
TO RECORD BOARD
[TIMER BOARD]
S601
TIMER
REC
OFF
PLAY
[SWITCH BOARD]
SONY
S708
RESET
S709
MEMORY
COUNTER
S702
REW
S701
AUTO STOP
S704
S703
S705
REC
S706
PAUSE
S707
REC MUTE
OFF
D702
D701
D703
GRY/YEL
IC603
IC602
IC601
Q606
D619
D620
D621
D622
D623
D624
CNJ1
CNJ2
CNJ3
CNJ4
CNJ13
S802 ON
R665
R620
R618
R619
R630
R633
R631
R632
R634
R629
R621
R622
R625
R626
R627
R628
R624
C626
C625
C627
C624
C622
C621
C623
C617
C618
C619
C620
C633
C634
C635
(CHASSIS)
REMOTE
TO METER BOARD (A)

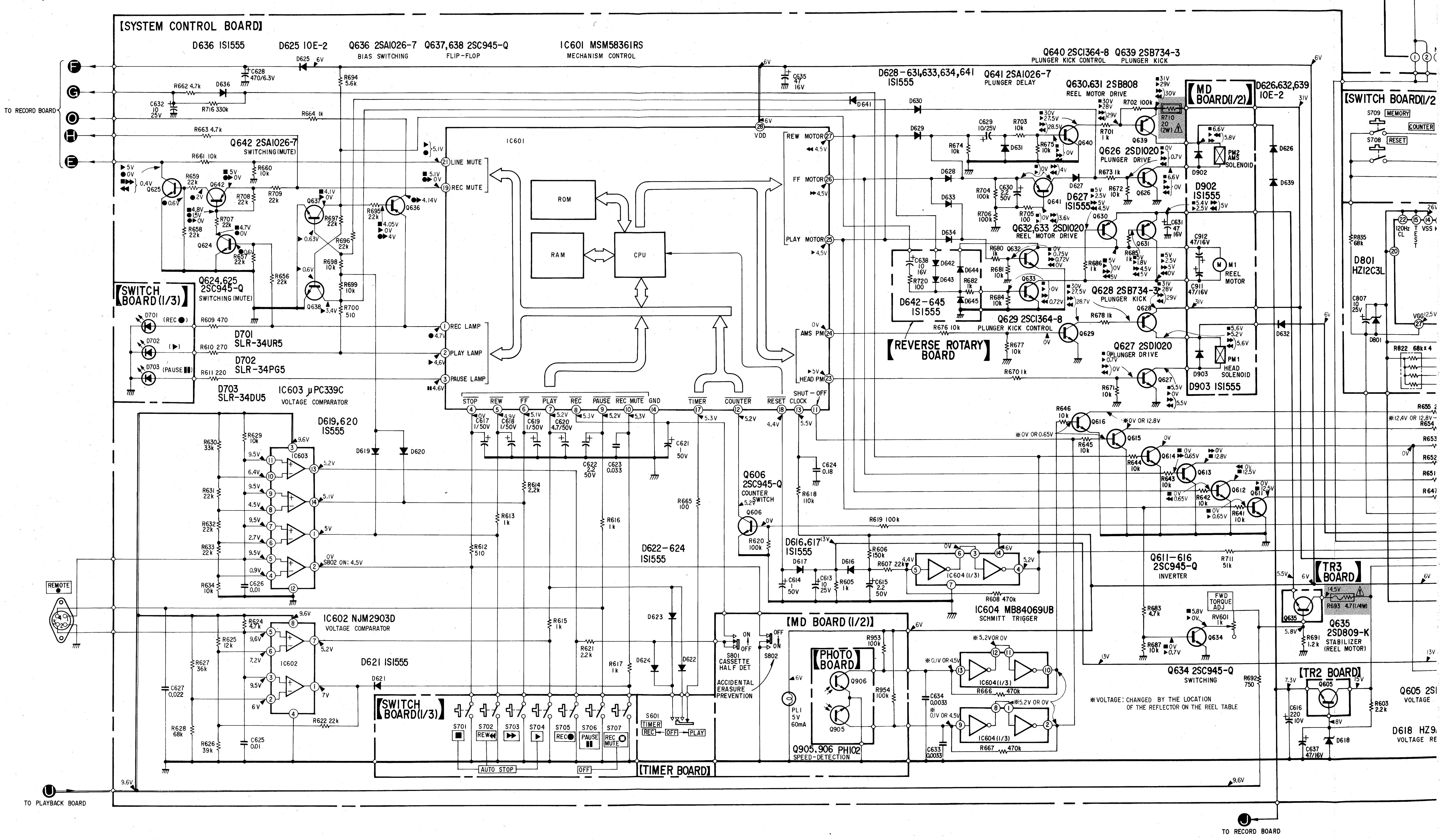
	O	P	Q	R	S	T	U	V	W	X	Y	Z	A1	B1	
1		603	606 617 641 IC601 642 636	627 625	626 633 624 638 637 640 632 604 639 629	631 630 628	634 602 601 643 610 608 614 615 616 611 613 612 609 607	621 622 623 618 619 620 IC604 635			906	905			Q IC
2	622 623 624	621 620 619	625 606 601 614	602 603 604 613 612 611 618 627 630 629 628	605 631 633 641 636 634	615 616 617 607 608 632 626 639	640 610 609	637 638		903	645 644 643 642			902	D

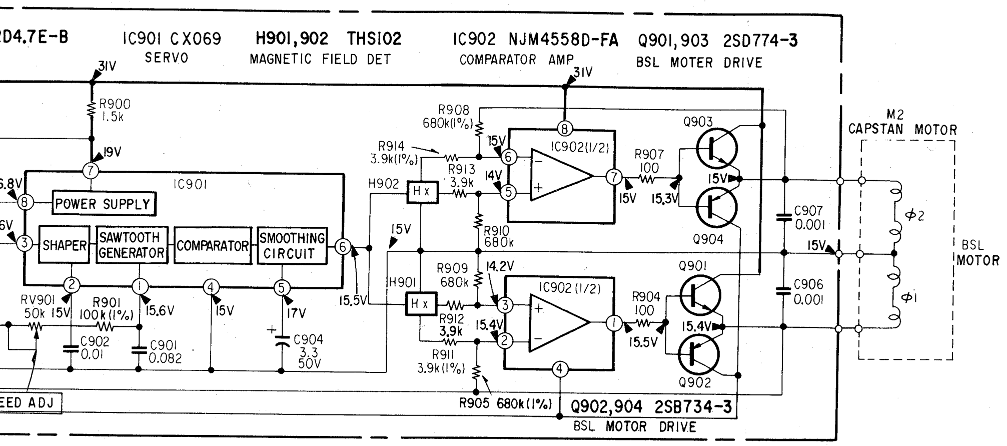

[SYSTEM COTROL BOARD]
TO PLAYBACK BOARD
TO METER BOARD(B)
[TRI BOARD]
TO RECORD BOARD
[REVERSE ROTARY BOARD]
SONY
1-607-454-
TO RECORD BOARD
TO METER BOARD(B)
TO METER BOARD(B)
DOLBY OFF 0V
DOLBY B ON 0V
C ON 0.63V
DOLBY OFF 0.V
DOLBY B ON 0.63V
C ON 0V
DOLBY OFF 0V
DOLBY B ON 0V
C ON 21.5V
DOLBY OFF 0V
DOLBY B ON 21.5V
C ON 0V
※5.2V OR 0V
※0.1V OR 4.5V
※0V OR 12.8V
HEAD PM1 SOLENOID
[MD BOARD]
S801 CASSETTE HARF DET
ON OFF
REEL MOTOR M1
ACCIDENTAL ERASURE PREVENTION
S802 ON OFF
PM2 AMS SOLENOID
[PHOTO BOARD]
※0.1V OR 4.5V
Q906
Q905
PL1 5V 60mA
[TR3 BOARD]
Q635
TO METER BOARD(A)
TO RECORD BOARD
IC601
IC604
IC601
14 GND
13 CLOCK
12 COUNTER
11 SHUT - OFF
10 REC MUTE
9 PAUSE
8 REC
7 PLAY
6 FF
5 REW
4 STOP
3 PAUSE LAMP
2 PLAY LAMP
1 REC LAMP
15 AMS SIGNAL
16 AMS
17 TIMER
18 RESET
19 REC MUTE
20 BIAS
21 LINE MUTE
22 R.P.P
23 HEAD PM
24 AMS PM
25 PLAY MOTOR
26 FF MOTOR
27 REW MOTOR
28 VDD
11
12
13

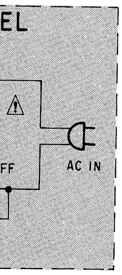
Note:
- ○— : parts extracted from the component side.
- ●— : parts extracted from the conductor side.
- Ⓕ : fusible resistor.
- ▨ : B + pattern

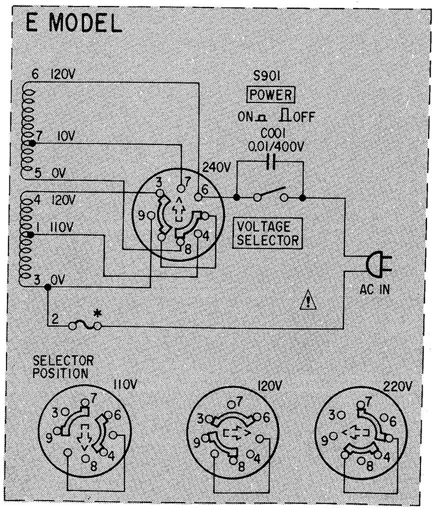
4-4. SCHEMATIC DIAGRAM

— System Control Section —


[SYSTEM CONTROL BOARD]
D636 1S1555
D625 10E-2
Q636 2SA1026-7 BIAS SWITCHING
Q637,638 2SC945-Q FLIP-FLOP
IC601 MSM58361RS MECHANISM CONTROL
Q640 2SC1364-8 PLUNGER KICK CONTROL
Q639 2SB734-3 PLUNGER KICK
D628-631,633,634,641 1S1555
Q641 2SA1026-7 PLUNGER DELAY
Q630,631 2SB808 REEL MOTOR DRIVE
[MD BOARD(1/2)]
D626,632,639 10E-2
[SWITCH BOARD(1/2
FLUORESCENT
TO RECORD BOARD
Q642 2SA1026-7 SWITCHING(MUTE)
Q624,625 2SC945-Q SWITCHING(MUTE)
[SWITCH BOARD(1/3)]
D701 SLR-34UR5
D702 SLR-34PG5
D703 SLR-34DU5
IC603 μPC339C VOLTAGE COMPARATOR
D619,620 1S555
IC601
ROM
RAM
CPU
LINE MUTE
REC MUTE
REC LAMP
PLAY LAMP
PAUSE LAMP
VDD
REW MOTOR
FF MOTOR
PLAY MOTOR
AMS PM
HEAD PM
STOP
REW
FF
PLAY
REC
PAUSE
REC MUTE
GND
TIMER
COUNTER
RESET
CLOCK
SHUT-OFF
Q626 2SD1020 PLUNGER DRIVE
D627 1S1555
Q632,633 2SD1020 REEL MOTOR DRIVE
D902 1S1555
PM2 AMS SOLENOID
M1 REEL MOTOR
Q628 2SB734-3 PLUNGER KICK
Q629 2SC1364-8 PLUNGER KICK CONTROL
D642-645 1S1555
[REVERSE ROTARY BOARD]
Q627 2SD1020 PLUNGER DRIVE
PM1 HEAD SOLENOID
D903 1S1555
D801 HZ12C3L
Q606 2SC945-Q COUNTER SWITCH
D622-624 1S1555
D616,617 1S1555
IC604 MB84069UB SCHMITT TRIGGER
Q611-616 2SC945-Q INVERTER
FWD TORQUE ADJ RV601 1k
Q634 2SC945-Q SWITCHING
[TR3 BOARD]
Q635 2SD809-K STABILIZER (REEL MOTOR)
R693 4.7(1/4W)
R710 20 (2W)
*VOLTAGE: CHANGED BY THE LOCATION OF THE REFLECTOR ON THE REEL TABLE
[TR2 BOARD]
Q605 2S VOLTAGE
D618 HZ9 VOLTAGE RE
REMOTE
IC602 NJM2903D VOLTAGE COMPARATOR
D621 1S1555
[SWITCH BOARD(1/3)]
S701 ■
S702 REW◀◀
S703 ▶▶
S704 ▶
S705 REC●
S706 PAUSE ❚❚
S707 REC MUTE
AUTO STOP
OFF
S601 TIMER REC OFF PLAY
[TIMER BOARD]
S801 CASSETTE HALF DET
S802 ACCIDENTAL ERASURE PREVENTION
[MD BOARD (1/2)]
[PHOTO BOARD]
Q905,906 PH102 SPEED-DETECTION
PL1 5V 60mA
TO PLAYBACK BOARD
TO RECORD BOARD
S709 MEMORY
S708 RESET


D4.7E-B
IC901 CX069
SERVO
H901,902 THS102
MAGNETIC FIELD DET
IC902 NJM4558D-FA
COMPARATOR AMP
Q901,903 2SD774-3
BSL MOTER DRIVE
31V
R900 1.5k
19V
IC901
POWER SUPPLY
SHAPER
SAWTOOTH GENERATOR
COMPARATOR
SMOOTHING CIRCUIT
RV901 50k
R901 100k(1%)
C902 0.01
C901 0.082
C904 3.3 50V
15.6V
15V
17V
15.5V
EED ADJ
R908 680k(1%)
R914 3.9k(1%)
R913 3.9k
H902
H901
Hx
R910 680k
R909 680k
R912 3.9k
R911 3.9k(1%)
R905 680k(1%)
IC902(1/2)
R907 100
R904 100
Q903
Q904
Q901
Q902
14.2V
15.4V
15.3V
Q902,904 2SB734-3
BSL MOTOR DRIVE
C907 0.001
C906 0.001
M2
CAPSTAN MOTOR
BSL MOTOR
Φ2
Φ1




E MODEL
6 120V
7 10V
5 0V
4 120V
1 110V
3 0V
2
S901
POWER
ON OFF
C001 0.01/400V
240V
VOLTAGE SELECTOR
AC IN
SELECTOR POSITION
110V
120V
220V

Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4 W unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- ——— : B+ bus.
- - - - : B- bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).

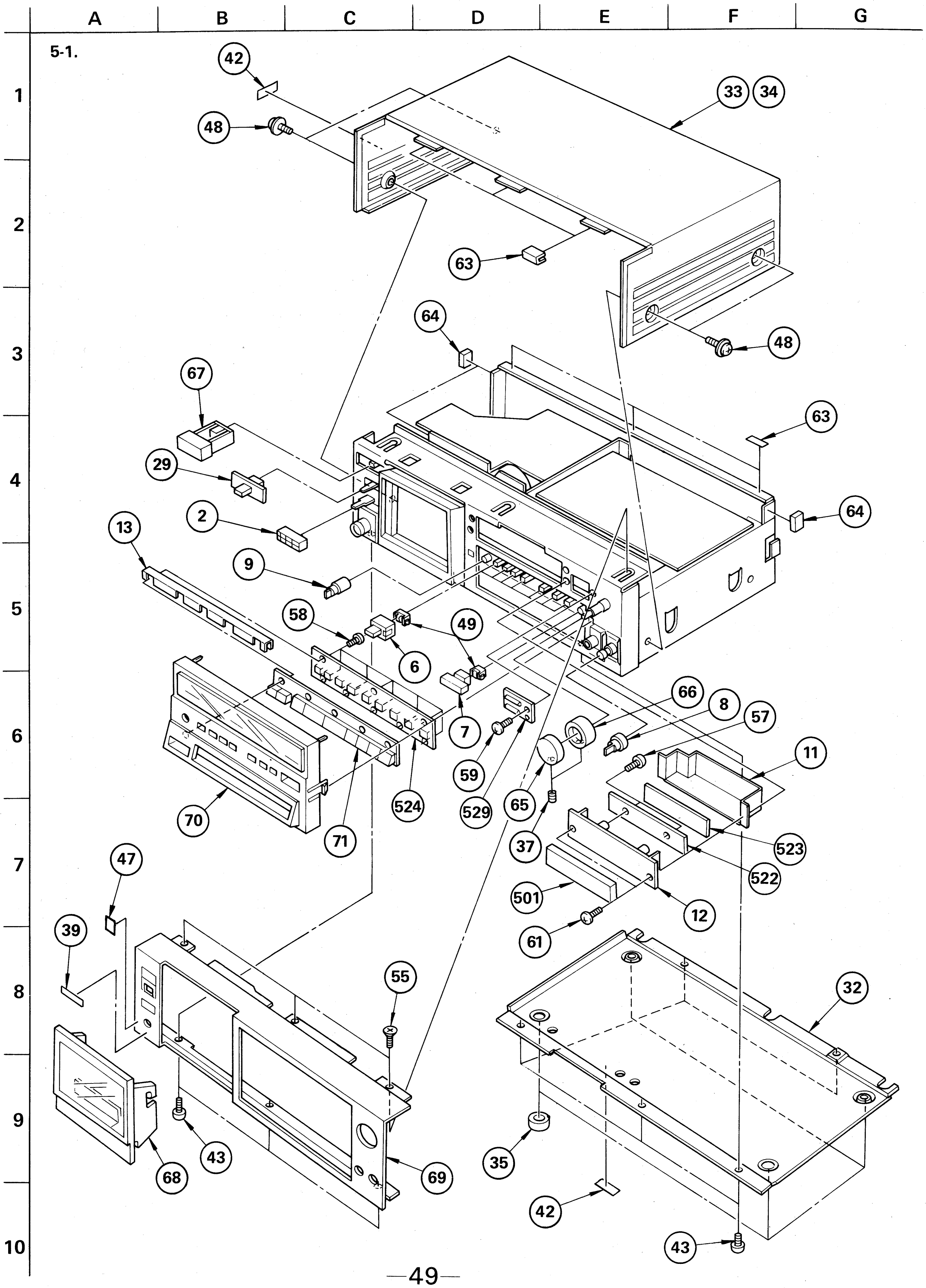
Note: Voltages are measured with a VOM (50kΩ/V).

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

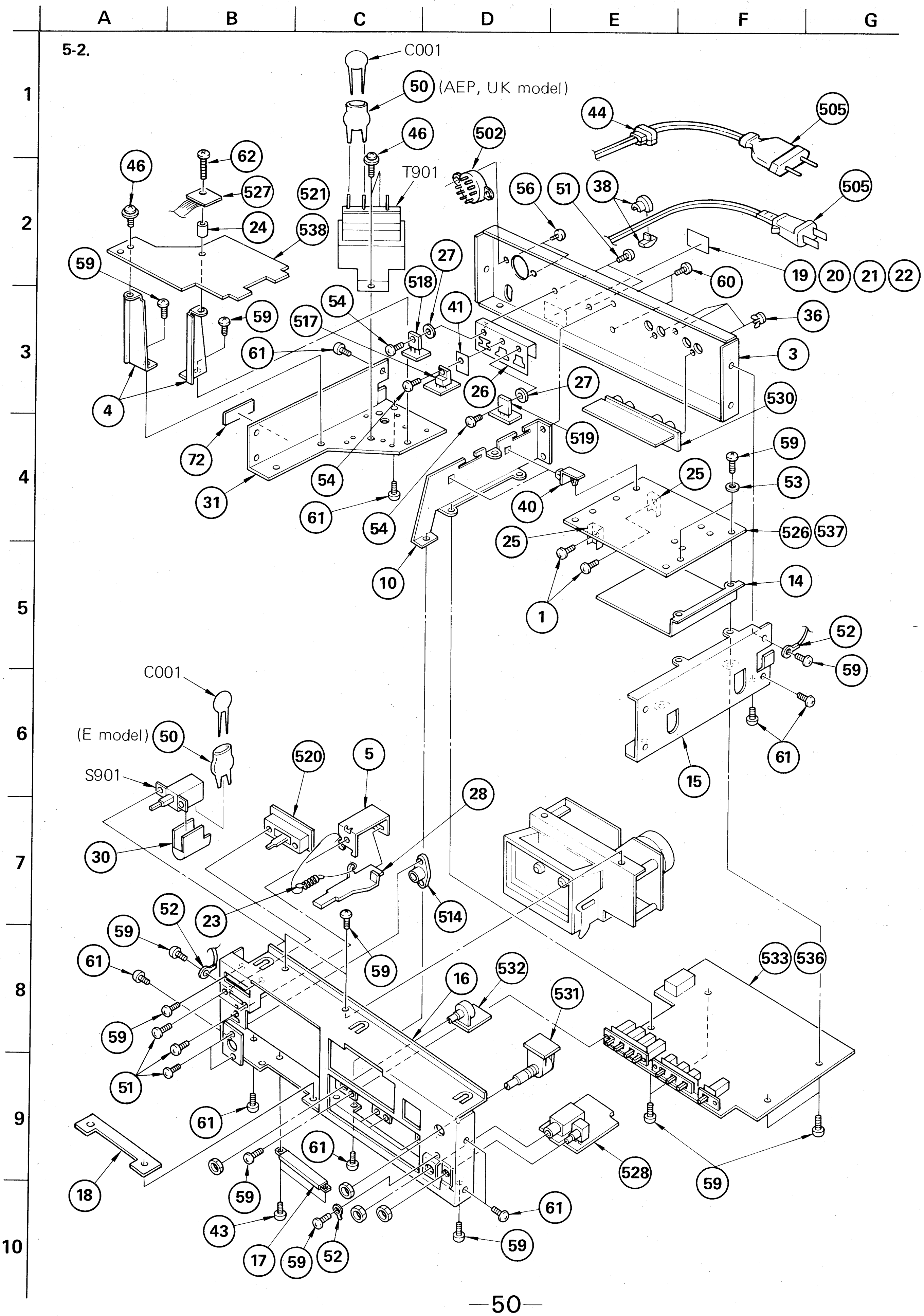
Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 5
EXPLODED VIEWS AND PARTS LIST

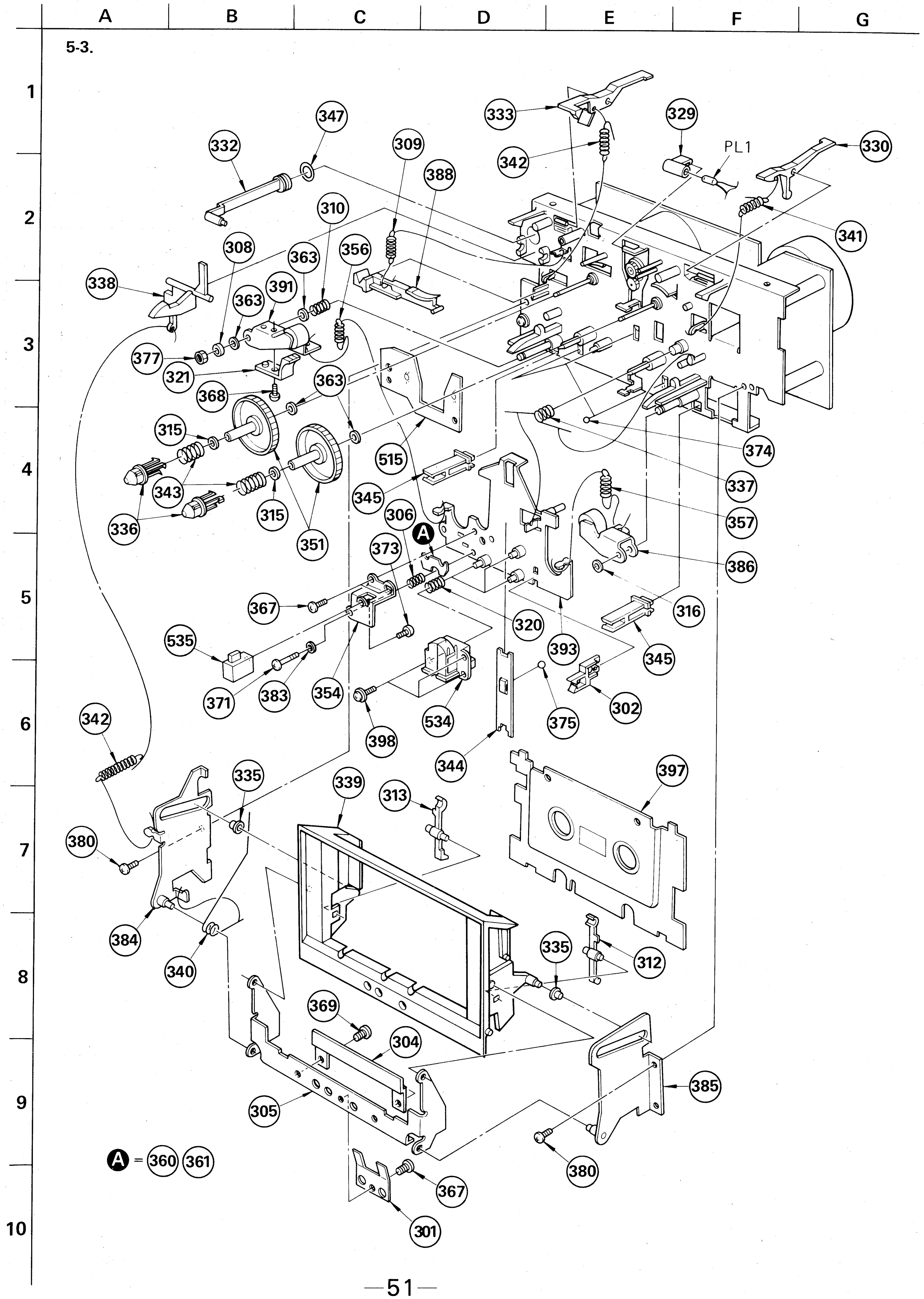
5-1.


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
42
33
34
48
63
64
48
67
63
29
64
2
13
9
58
49
6
66
8
57
7
11
59
529
65
524
70
71
37
523
522
501
12
47
39
61
55
32
43
68
69
35
42
43

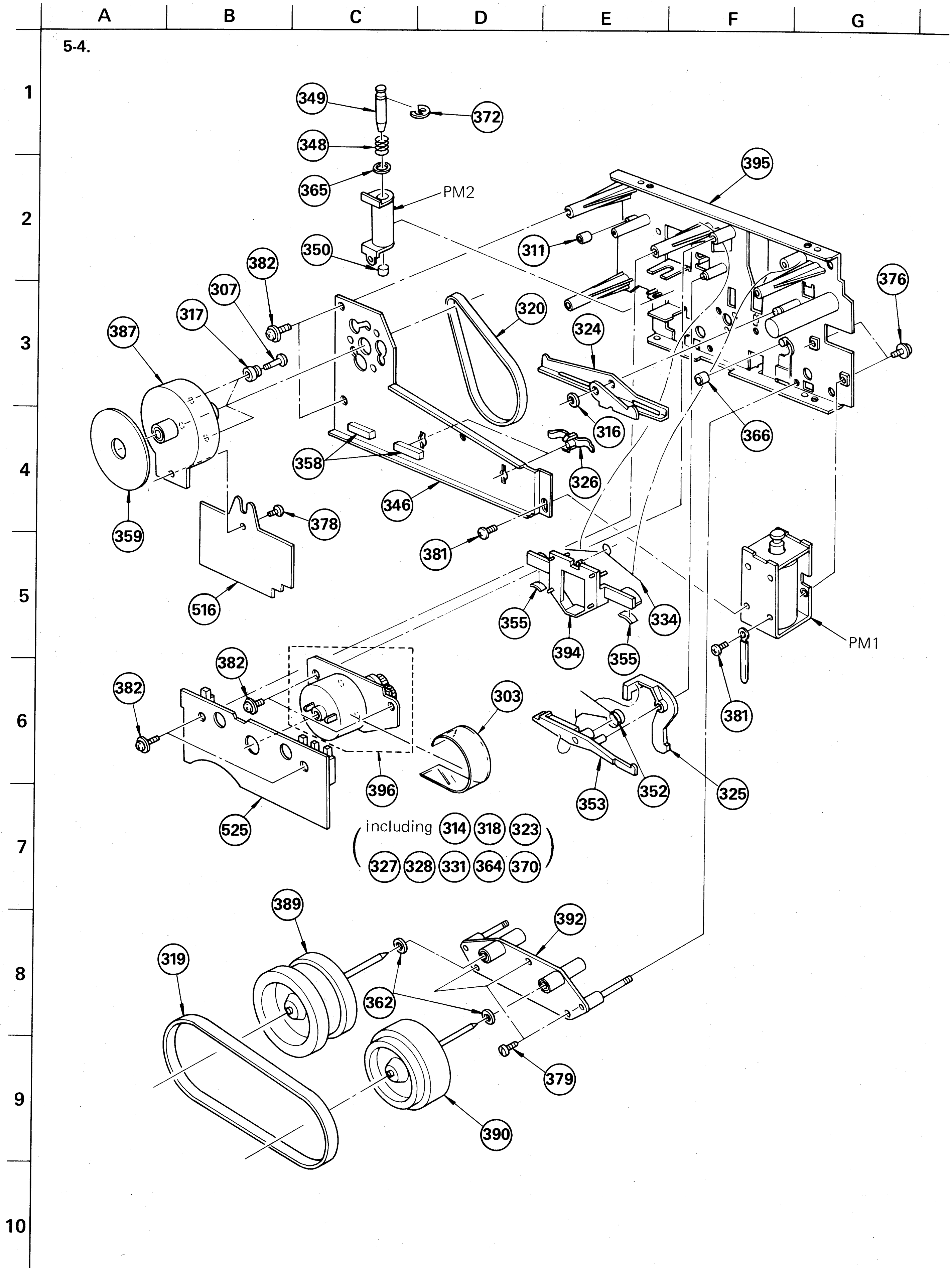
5-2.


A
B
C
D
E
F
G
C001
50 (AEP, UK model)
T901
C001
(E model) 50
S901

5-3.


A
B
C
D
E
F
G
PL1
A
A = 360 361

5-4.


A
B
C
D
E
F
G
PM2
PM1
including 314 318 323
327 328 331 364 370

GENERAL SECTION

No.	Part No.	Description
1	2-259-121-00	SCREW, TR
2	3-304-419-31	BUTTON, EJECT
3	♠;3-304-907-41	(US,Canadian)...PLATE, JACK
3	♠;3-304-908-01	(AEP,UK)........PLATE, JACK
3	♠;3-304-908-12	(E).............PLATE, JACK
4	♠;3-304-910-00	BRACKET, PC BOARD
5	♠;3-304-911-00	SLIDER, EJECT
6	3-304-926-11	KNOB (A), PUSH
7	3-304-927-11	KNOB (B), PUSH
8	3-304-929-11	KNOB, HEADPHONE
9	3-304-930-11	KNOB, BIAS
10	♠;3-304-934-00	PLATE, RELAY
11	♠;3-304-935-00	CASE, SHIELD
12	♠;3-304-938-00	HOLDER, FL TUBE
13	♠;3-304-939-00	BRACKET, CONTROL BUTTON
14	♠;3-304-942-00	PLATE, SHIELD, PLAYBACK PCB
15	♠;3-304-944-00	PLATE, SIDE, RIGHT
16	♠;3-304-949-05	CHASSIS, AMPLIFIER
17	3-304-962-00	COVER, MD
18	♠;3-304-975-00	SHEET, ORNAMENTAL
19	3-304-976-00	LABEL, MODEL NUMBER (U,CND)
20	3-304-977-00	LABEL, MODEL NUMBER (AEP3)
21	3-304-978-00	LABEL, MODEL NUMBER (UK)
22	3-304-979-00	LABEL, MODEL NUMBER (E1,E2)
23	3-534-238-XX	SPRING, TENSION
24	♠;3-565-796-00	SPACER, PC BOARD
25	♠;3-567-242-00	HEAT SINK
26	♠;3-572-305-00	HEAT SINK
27	3-572-365-11	SHEET, INSULATING (A)
28	♠;3-575-502-00	BRACKET, EJECT
29	3-575-515-41	KNOB, SLIDE SWITCH
30	3-575-524-00	COVER, POWER SWITCH
31	♠;3-575-537-00	PLATE, SIDE, LEFT
32	♠;3-575-538-21	PLATE, BOTTOM
33	3-575-539-41	CASE
34	3-575-544-31	PLATE, EXPANSION, CASE
35	3-576-731-00	FELT (H)
36	3-646-090-11	RIVET, NYLON
37	3-701-506-01	SET SCREW, DOUBLE POINT 3X4
38	3-701-682-00	(US,Canadian)...STOPPER, CORD
39	3-701-690-00	(UK)........LABEL (MADE IN JAPAN)
40	♠;3-701-832-00	HINGE, CIRCUIT BOARD
41	3-703-037-00	INSULATOR, TO-220
42	3-703-079-21	(US,UK)....LABEL, CAUTION, SUB

GENERAL SECTION

No.	Part No.	Description
43	3-703-108-21	SCREW +BV 3X6, S TIGHT
44	3-703-244-00	(AEP,UK,E)...BUSHING, CORD
45	3-703-330-01	(UK)....LABEL, SEAL
46	3-703-486-00	+PTTWH 3X5
47	3-703-710-41	STICKER, SONY SYMBOL (12)
48	4-820-330-21	SCREW, BW, PLUS MINUS
49	4-864-307-00	RING
50	4-875-455-21	(AEP,UK,E)....COVER (DIA.20), CAPACITOR
51	7-621-775-20	SCREW +B 2.6X5
52	7-623-508-01	LUG, 3
53	7-623-955-11	WASHER 4.0, FIBER
54	7-682-147-20	SCREW +P 3X6
55	7-682-247-04	SCREW +K 3X6
56	7-682-547-09	SCREW +B 3X6
57	7-685-146-14	SCREW +P 3X8 TYPE2 SLIT
58	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
59	7-685-871-01	SCREW +BVTT 3X6 (S)
60	7-685-871-09	SCREW +BVTT 3X6 (S)
61	7-685-872-01	SCREW +BVTT 3X8 (S)
62	7-685-877-01	SCREW +BVTT 3X20 (S)
63	9-911-837-XX	CUSHION, FILTER
64	9-911-841-XX	CUSHION
65	X-3304-909-0	KNOB (RIGHT) ASSY, REC
66	X-3304-910-0	KNOB (LEFT) ASSY, REC
67	X-3304-911-0	KNOB ASSY, POWER
68	X-3304-913-0	WINDOW ASSY, CASSETTE
69	X-3304-914-0	PANEL ASSY, FRONT
70	X-3304-915-0	ESCUTCHEON SUB ASSY
71	X-3304-916-0	BUTTON ASSY, CONTROL
72	♠;3-703-711-00	LABEL, CAUTION, BARRIER

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

COILS

- MMH : mH, UH : μH

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	1-551-734-11	CORD, CONNECTION (RK- 74A)
102	3-304-902-00	CUSHION (LEFT), UPPER
103	3-304-903-00	CUSHION (RIGHT), UPPER
104	3-304-904-00	CUSHION (LEFT), LOWER
105	3-304-905-00	CUSHION (RIGHT), LOWER
106	3-304-956-00	SHEET, PROTECTION
107	3-304-973-00	SHEET, PROTECTION
108	3-304-980-00	INDIVIDUAL CARTON
109	3-701-630-00	BAG, POLYETHYLENE
110	3-773-146-11	(Canadian,UK,AEP,E)...MANUAL, INSTRUCTION
110	3-773-146-21	(US)..................MANUAL, INSTRUCTION
110	3-773-146-41	(AEP)................MANUAL, INSTRUCTION
111	3-793-481-13	(Canadian,AEP,UK,E)...INSTRUCTION
112	3-793-828-11	QUESTIONNAIRE
113	8-890-454-10	(Canadian)...TAPE (UCX-S)
114	X-3701-105-0	ROD ASSY, CLEANING, HEAD

MECHANISM SECTION

No.	Part No.	Description
301	3-304-639-00	PLATE, SHIELD, HEAD
302 ♠;	3-304-963-00	RETAINER, LEAD
303	3-306-209-00	PLATE (D), SHIELD, MOTOR
304	3-306-214-00	ESCUTCHEON, HEAD ORNAMENT
305	3-306-215-00	LEVER, FULCRUM, HOLDER
306	3-481-272-00	SPRING, COMPRESSION
307	3-489-077-21	SCREW, MOTOR STOPPER
308	3-491-191-00	COLLAR
309	3-537-205-00	SPRING, TENSION
310	3-537-213-00	SPRING, COMPRESSION
311	3-538-051-00	RUBBER, BRAKE
312	3-555-113-00	SPRING (RIGHT)
313	3-555-114-00	SPRING (LEFT)
314	3-558-708-01	WASHER, STOPPER
315	3-558-708-11	WASHER, STOPPER
316	3-558-708-21	WASHER, STOPPER
317	3-564-017-00	RUBBER, CUSHION
318	3-564-027-11	FELT, LIMITER
319	3-564-088-00	BELT (2), CAPSTAN
320	3-564-121-00	SPRING, COMPRESSION
321	3-564-138-00	GUIDE (S), TAPE
322	3-564-319-00	BELT, CAPSTAN
323	3-575-304-00	SHAFT, GEAR, FR
324 ♠;	3-575-307-00	LEVER, FWD
325	3-575-318-00	LEVER, LOCK, TUNING
326	3-575-321-00	RETAINER, THRUST, CAPSTAN
327	3-575-324-00	GEAR, LIMITER
328	3-575-327-00	STOPPER
329	3-575-328-00	HOLDER, LAMP
330 ♠;	3-575-331-00	LEVER, DETECTION, HALF
331	3-575-332-00	GEAR, FR
332	3-575-333-00	PISTON
333 ♠;	3-575-334-00	LEVER, DETECTION, REC
334	3-575-345-00	SPRING
335	3-575-348-00	ROLLER, GUIDE, THREADING
336	3-575-350-00	CLAW, REEL TABLE
337	3-575-351-00	SPRING
338	3-575-354-00	LEVER, LOCK
339	3-575-355-31	HOLDER, CASSETTE
340	3-575-356-00	SPRING
341	3-575-358-00	SPRING, TENSION
342	3-575-364-00	SPRING, TENSION
343	3-575-365-00	SPRING, COMPRESSION
344 ♠;	3-575-377-00	SPRING
345 ♠;	3-575-378-00	GUIDE, LEAD
346 ♠;	3-575-381-00	RETAINER (W), THRUST
347	3-575-392-00	RING, PISTON
348	3-575-414-00	SPRING, COMPRESSION
349	3-575-415-11	ARBOR, MOVABLE
350	3-575-416-11	ARBOR, FIXED
351	3-575-447-00	TABLE, REEL
352	3-575-458-00	SPRING
353	3-575-460-00	LEVER, SELECT TUNE
354 ♠;	3-575-464-00	BRACKET, HEAD, ERASE
355	3-575-469-00	SHOE, BRAKE
356	3-575-481-00	SPRING, TENSION
357	3-575-482-00	SPRING, TENSION
358	3-575-485-00	RUBER, VIBRATION PROOF
359	3-575-486-00	SHEET, VIBRATION PROOF
360	3-576-835-01	SEAM, ADJUSTMENT, ERASE HEAD

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

COILS

- MMH : mH, UH : μH

MECHANISM SECTION

No.	Part No.	Description
361	3-576-835-11	SEAM, ADJUSTMENT, ERASE HEAD
362	3-701-438-21	WASHER
363	3-701-439-21	WASHER
364	3-701-441-01	WASHER
365	3-701-444-11	WASHER, 6
366	4-855-109-12	RUBBER, LIFTER CUSHION
367	7-621-772-00	SCREW +B 2X3
368	7-621-772-10	SCREW +B 2X4
369	7-621-772-30	SCREW +B 2X6
370	7-621-775-10	SCREW +B 2.6X4
371	7-621-775-50	SCREW +B 2.6X10
372	7-624-110-04	STOP RING 6.0, TYPE -E
373	7-627-552-38	SCREW, PRECISION +P 1.7X3
374	7-671-112-11	BALL, STEEL
375	7-671-113-11	BALL, STEEL
376	7-682-949-01	SCREW +PSW 3X10
377	7-684-023-04	N 3, TYPE 2
378	7-685-533-11	SCREW +BTP 2.6X6 TYPE2 N-S
379	7-685-791-01	SCREW +PTT 2.6X5 (S)
380	7-685-862-01	SCREW +BVTT 2.6X6 (S)
381	7-685-870-01	SCREW +BVTT 3X5 (S)
382	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
383	7-688-002-12	W 2.6, MIDDLE
384	●;X-3575-301-0	PLATE (A) ASSY, HOLDER FULCRUM
385	●;X-3575-302-0	PLATE (B) ASSY, FULCRUM
386	X-3575-304-0	PINCH LEVER (T) ASSY
387	X-3575-308-0	MOTOR COMPLETE ASSY, BSL
388	X-3575-310-0	LEVER ASSY, TENSION, BACK
389	X-3575-319-0	FLYWHEEL (RIGHT) ASSY
390	X-3575-320-0	FLYWHEEL (LEFT) ASSY
391	X-3575-321-0	PINCH LEVER (S) ASSY
392	X-3575-322-0	BASE ASSY, CAPSTAN
393	X-3575-323-0	CHASSIS ASSY, HEAD
394	●;X-3575-342-0	PLATE ASSY, BRAKE
395	●;X-3575-344-0	CHASSIS ASSY, MECHANISM
396	X-3575-349-0	MOTOR ASSY, REEL
397	●;X-3575-355-0	PLATE ASSY, ORNAMENTAL
398	3-701-467-01	SCREW 2X5

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-519-247-00	INDICATOR TUBE, FLUORESCENT
502	⚠.1-526-576-31	(E).....SELECTOR, POWER VOLTAGE
503	1-554-007-00	SWITCH, PUSH (S501-S504)
504	1-554-008-00	SWITCH, PUSH (S505-S508)
505	⚠.1-551-472-00	(E2)............CORD, POWER
505	⚠.1-555-735-00	(E1)............CORD, POWER
505	⚠.1-555-795-00	(AEP)...........CORD, POWER
505	⚠.1-556-035-00	(UK)............CORD, POWER
505	⚠.1-556-874-00	(US,Canadian)...CORD, POWER
506	●;1-560-060-00	PIN, CONNECTOR 2P
507	●;1-560-061-00	PIN, CONNECTOR 3P
508	●;1-560-062-00	PIN, CONNECTOR 4P
509	●;1-560-063-00	PIN, CONNECTOR 5P
510	●;1-560-064-00	PIN, CONNECTOR 6P
511	●;1-560-065-00	PIN, CONNECTOR 8P
512	●;1-560-338-00	PIN, CONNECTOR 7P
513	●;1-560-339-00	PIN, CONNECTOR 9P
514	1-561-293-00	SOCKET (4P)
515	●;1-603-823-00	PC BOARD, PHOTO
516	●;1-603-825-00	PC BOARD, SERVO
517	●;1-606-778-00	PC BOARD, TR-1
518	●;1-606-779-00	PC BOARD, TR-2
519	●;1-606-780-00	PC BOARD, TR-3
520	●;1-606-781-00	PC BOARD, TIMER
521	●;1-606-782-00	PC BOARD, SYSTEM CONTROL
522	●;1-606-783-00	PC BOARD, METER (A)
523	●;1-606-784-00	PC BOARD, METER (B)
524	●;1-606-785-00	PC BOARD, CONTROL SWITCH
525	●;1-606-786-00	PC BOARD, MD
526	●;1-606-787-00	PC BOARD, PB
527	●;1-607-454-00	PC BOARD,
528	●;1-608-472-00	PC BOARD, H.P
529	●;1-608-473-00	PC BOARD, LAMP
530	●;1-608-474-00	PC BOARD, PIN JACK
531	●;1-608-475-00	PC BOARD, VOL
532	●;1-608-476-00	PC BOARD, BIAS FINE
533	●;1-608-477-00	PC BOARD, REC
534	8-825-500-30	HEAD, REC/PB (RPA230-3602)
535	8-825-604-30	HEAD, ERASE (EF206-36B)
536	●;A-2006-049-A	MOUNTED PCB, REC
537	●;A-2008-037-A	MOUNTED PCB, PB
538	●;A-2019-141-A	MOUNTED PCB, SYSTEM CONTROL
C001	⚠.1-161-744-00	(AEP,UK,E)......CAP, CERAMIC 10000PF
C001	⚠.1-161-749-00	(US,Canadian)...CAP, CERAMIC 10000PF

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SEMICONDUCTORS

In each case, U : µ, for example:
UA···: µA···, UPA···: µPA···, UPC···: µPC,
UPD···: µPD···

CAPACITORS:

- All capacitors are in µF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:µF, PF:µµF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : µH

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C101	1-107-231-00	MICA	360PF	5%	50V
C103	1-130-305-00	FILM	0.022MF	5%	100V
C104	1-123-830-00	ELECT	4.7MF	20%	50V
C105	1-130-289-00	FILM	0.0047MF	5%	100V
C107	1-161-319-00	CERAMIC	470PF	10%	50V
C108	1-130-634-00	FILM	0.15MF	5%	50V
C109	1-130-628-00	FILM	0.047MF	5%	50V
C110	1-130-625-00	FILM	0.027MF	5%	50V
C112	1-130-633-00	FILM	0.12MF	5%	50V
C113	1-130-892-00	FILM	0.015MF	3%	100V
C114	1-130-856-00	FILM	0.0068MF	3%	100V
C115	1-130-623-00	FILM	0.018MF	5%	50V
C116	1-130-631-00	FILM	0.082MF	5%	50V
C118	1-130-635-00	FILM	0.18MF	5%	50V
C119	1-130-634-00	FILM	0.15MF	5%	50V
C120	1-130-632-00	FILM	0.1MF	5%	50V
C121	1-130-632-00	FILM	0.1MF	5%	50V
C122	1-130-621-00	FILM	0.012MF	5%	50V
C123	1-130-633-00	FILM	0.12MF	5%	50V
C124	1-130-851-00	FILM	0.082MF	3%	100V
C126	1-130-893-00	FILM	0.027MF	3%	100V
C127	1-130-856-00	FILM	0.0068MF	3%	100V
C128	1-123-232-00	ELECT	4.7MF	20%	50V
C201	1-107-231-00	MICA	360PF	5%	50V
C203	1-130-305-00	FILM	0.022MF	5%	100V
C204	1-123-830-00	ELECT	4.7MF	20%	50V
C205	1-130-289-00	FILM	0.0047MF	5%	100V
C207	1-161-319-00	CERAMIC	470PF	10%	50V
C208	1-130-634-00	FILM	0.15MF	5%	50V
C209	1-130-628-00	FILM	0.047MF	5%	50V
C210	1-130-625-00	FILM	0.027MF	5%	50V
C212	1-130-633-00	FILM	0.12MF	5%	50V
C213	1-130-892-00	FILM	0.015MF	3%	100V
C214	1-130-856-00	FILM	0.0068MF	3%	100V
C215	1-130-623-00	FILM	0.018MF	5%	50V
C216	1-130-631-00	FILM	0.082MF	5%	50V
C218	1-130-635-00	FILM	0.18MF	5%	50V
C219	1-130-634-00	FILM	0.15MF	5%	50V
C220	1-130-632-00	FILM	0.1MF	5%	50V
C221	1-130-632-00	FILM	0.1MF	5%	50V
C222	1-130-621-00	FILM	0.012MF	5%	50V
C223	1-130-633-00	FILM	0.12MF	5%	50V
C224	1-130-851-00	FILM	0.082MF	3%	100V
C226	1-130-893-00	FILM	0.027MF	3%	100V
C227	1-130-856-00	FILM	0.0068MF	3%	100V
C228	1-123-232-00	ELECT	4.7MF	20%	50V
C307	1-130-635-00	FILM	0.18MF	5%	50V
C308	1-130-634-00	FILM	0.15MF	5%	50V
C309	1-130-632-00	FILM	0.1MF	5%	50V
C310	1-130-632-00	FILM	0.1MF	5%	50V
C311	1-130-621-00	FILM	0.012MF	5%	50V
C312	1-130-633-00	FILM	0.12MF	5%	50V
C315	1-130-851-00	FILM	0.082MF	3%	100V
C317	1-130-856-00	FILM	0.0068MF	3%	100V
C318	1-130-893-00	FILM	0.027MF	3%	100V
C319	1-123-232-00	ELECT	4.7MF	20%	50V
C321	1-130-625-00	FILM	0.027MF	5%	50V
C323	1-123-234-00	ELECT	10MF	20%	50V
C324	1-130-620-00	FILM	0.01MF	5%	50V
C325	1-130-626-00	FILM	0.033MF	5%	50V
C326	1-130-622-00	FILM	0.015MF	5%	50V
C327	1-130-629-00	FILM	0.056MF	5%	50V
C328	1-130-621-00	FILM	0.012MF	5%	50V
C329	1-130-630-00	FILM	0.068MF	5%	50V
C330	1-130-622-00	FILM	0.015MF	5%	50V
C334	1-130-634-00	FILM	0.15MF	5%	50V
C335	1-130-628-00	FILM	0.047MF	5%	50V
C336	1-130-625-00	FILM	0.027MF	5%	50V
C337	1-130-633-00	FILM	0.12MF	5%	50V
C339	1-130-856-00	FILM	0.0068MF	3%	100V
C340	1-130-623-00	FILM	0.018MF	5%	50V
C344	1-130-631-00	FILM	0.082MF	5%	50V
C350	1-107-172-00	MICA	130PF	5%	500V
C351	1-107-171-00	MICA	120PF	5%	500V
C407	1-130-635-00	FILM	0.18MF	5%	50V
C408	1-130-634-00	FILM	0.15MF	5%	50V
C409	1-130-632-00	FILM	0.1MF	5%	50V
C410	1-130-632-00	FILM	0.1MF	5%	50V
C411	1-130-621-00	FILM	0.012MF	5%	50V
C412	1-130-633-00	FILM	0.12MF	5%	50V
C415	1-130-851-00	FILM	0.082MF	3%	100V
C417	1-130-856-00	FILM	0.0068MF	3%	100V
C418	1-130-893-00	FILM	0.027MF	3%	100V
C419	1-123-232-00	ELECT	4.7MF	20%	50V
C421	1-130-625-00	FILM	0.027MF	5%	50V
C423	1-123-234-00	ELECT	10MF	20%	50V
C424	1-130-620-00	FILM	0.01MF	5%	50V
C425	1-130-626-00	FILM	0.033MF	5%	50V
C426	1-130-622-00	FILM	0.015MF	5%	50V
C427	1-130-629-00	FILM	0.056MF	5%	50V

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

COILS

- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C428	1-130-621-00	FILM	0.012MF	5%	50V
C429	1-130-630-00	FILM	0.068MF	5%	50V
C430	1-130-622-00	FILM	0.015MF	5%	50V
C434	1-130-634-00	FILM	0.15MF	5%	50V
C435	1-130-628-00	FILM	0.047MF	5%	50V
C436	1-130-625-00	FILM	0.027MF	5%	50V
C437	1-130-633-00	FILM	0.12MF	5%	50V
C439	1-130-856-00	FILM	0.0068MF	3%	100V
C440	1-130-623-00	FILM	0.018MF	5%	50V
C444	1-130-631-00	FILM	0.082MF	5%	50V
C450	1-107-172-00	MICA	130PF	5%	500V
C451	1-107-171-00	MICA	120PF	5%	500V
C507 ⚠	1-123-335-00	ELECT	330MF	20%	25V
C508 ⚠	1-123-311-00	ELECT	1000MF	20%	10V
C509 ⚠	1-123-335-00	ELECT	330MF	20%	25V
C511 ⚠	1-123-311-00	ELECT	1000MF	20%	10V
C513	1-141-225-00	CAP, TUNING, TRIMAR			
C601 ⚠	1-123-337-00	ELECT	1000MF	20%	25V
C602 ⚠	1-123-697-00	ELECT	1000MF	20%	25V
C603 ⚠	1-123-697-00	ELECT	1000MF	20%	25V
C604 ⚠	1-123-361-00	ELECT	220MF	20%	25V
C609 ⚠	1-123-349-00	ELECT	1000MF	20%	35V
C610 ⚠	1-123-325-00	ELECT	2200MF	20%	16V
C623	1-130-626-00	FILM	0.033MF	5%	50V
C624	1-130-635-00	FILM	0.18MF	5%	50V
C636 ⚠	1-123-323-00	ELECT	470MF	20%	16V
C802	1-130-623-00	FILM	0.018MF	5%	50V
CNJ301	1-507-531-00	PLATE, PIN-JACK			
CNJ302	1-507-531-00	PLATE, PIN-JACK			
CNJ401	1-507-531-00	PLATE, PIN-JACK			
CNJ402	1-507-531-00	PLATE, PIN-JACK			
CNJ501	1-507-659-00	JACK			
CP501	1-464-132-00	UNIT, BIAS OSCILLATOR			
D501	8-719-910-64	DIODE HZ6B1L			
D502	8-719-910-64	DIODE HZ6B1L			
D503	8-719-815-55	DIODE 1S1555			
D504	8-719-815-55	DIODE 1S1555			
D505	8-719-815-55	DIODE 1S1555			
D506	8-719-815-55	DIODE 1S1555			
D507	8-719-815-55	DIODE 1S1555			
D508	8-719-815-55	DIODE 1S1555			
D509	8-719-815-55	DIODE 1S1555			
D601 ⚠	8-719-200-02	DIODE 10E-2			
D602 ⚠	8-719-200-02	DIODE 10E-2			
D603 ⚠	8-719-200-02	DIODE 10E-2			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D604 ⚠	8-719-200-02	DIODE 10E-2
D605 ⚠	8-719-200-02	DIODE 10E-2
D606 ⚠	8-719-999-81	DIODE EQA01-08R1
D607	8-719-200-02	DIODE 10E-2
D608	8-719-200-02	DIODE 10E-2
D609	8-719-902-23	DIODE HZ22-3L
D610	8-719-922-71	DIODE HZ27-1L
D611 ⚠	8-719-200-02	DIODE 10E-2
D612 ⚠	8-719-200-02	DIODE 10E-2
D613 ⚠	8-719-200-02	DIODE 10E-2
D614 ⚠	8-719-200-02	DIODE 10E-2
D616	8-719-815-55	DIODE 1S1555
D617	8-719-815-55	DIODE 1S1555
D618	8-719-910-92	DIODE HZ9A2L
D619	8-719-815-55	DIODE 1S1555
D620	8-719-815-55	DIODE 1S1555
D621	8-719-815-55	DIODE 1S1555
D622	8-719-815-55	DIODE 1S1555
D623	8-719-815-55	DIODE 1S1555
D624	8-719-815-55	DIODE 1S1555
D625	8-719-200-02	DIODE 10E-2
D626	8-719-200-02	DIODE 10E-2
D627	8-719-815-55	DIODE 1S1555
D628	8-719-815-55	DIODE 1S1555
D629	8-719-815-55	DIODE 1S1555
D630	8-719-815-55	DIODE 1S1555
D631	8-719-815-55	DIODE 1S1555
D632	8-719-200-02	DIODE 10E-2
D633	8-719-815-55	DIODE 1S1555
D634	8-719-815-55	DIODE 1S1555
D636	8-719-815-55	DIODE 1S1555
D637	8-719-815-55	DIODE 1S1555
D638	8-719-815-55	DIODE 1S1555
D639	8-719-200-02	DIODE 10E-2
D640	8-719-200-02	DIODE 10E-2
D641	8-719-815-55	DIODE 1S1555
D642	8-719-815-55	DIODE 1S1555
D643	8-719-815-55	DIODE 1S1555
D644	8-719-815-55	DIODE 1S1555
D645	8-719-815-55	DIODE 1S1555
D701	8-719-902-33	DIODE SLR-34UR5
D702	8-719-902-26	DIODE SLR-34PG5
D703	8-719-902-25	DIODE SLR-34DU5
D801	8-719-910-29	DIODE HZ12C3L
D802	8-719-815-55	DIODE 1S1555

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- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

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- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
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ELECTRICAL PARTS

Ref.No.	Part No.	Description
D803	8-719-815-55	DIODE 1S1555
D901	8-719-100-27	DIODE RD4.7E-B2
D902	8-719-815-55	DIODE 1S1555
H901	8-719-814-11	DIODE THS102
H902	8-719-814-11	DIODE THS102
IC101	8-759-100-04	IC CX-174
IC102	8-759-100-04	IC CX-174
IC201	8-759-100-04	IC CX-174
IC202	8-759-100-04	IC CX-174
IC301	8-759-100-04	IC CX-174
IC302	8-759-100-04	IC CX-174
IC401	8-759-100-04	IC CX-174
IC402	8-759-100-04	IC CX-174
IC501	8-759-700-04	IC NJM2043D-D
IC502	8-759-961-38	IC BA6138
IC503	8-759-145-57	IC UPC4557C
IC601	8-759-900-71	IC MSM58361RS
IC602	8-759-729-03	IC NJM2903D
IC603	8-759-133-90	IC UPC339C
IC604	8-759-984-69	IC MB84069UB
IC801	8-759-904-72	IC MSL9359RS
IC802	8-759-100-12	IC UPD554C-089
IC901	8-750-600-69	IC CX-069A
IC902	8-759-700-58	IC NJM4558D-FA
L101	1-407-240-00	MICRO INDUCTOR 22MMH
L102	1-408-259-00	MICRO INDUCTOR 15MMH
L201	1-407-240-00	MICRO INDUCTOR 22MMH
L202	1-408-259-00	MICRO INDUCTOR 15MMH
L301	1-408-259-00	MICRO INDUCTOR 15MMH
L302	1-408-254-00	MICRO INDUCTOR 5.6MMH
L303	1-408-252-00	MICRO INDUCTOR 3.9MMH
L304	1-408-253-00	MICRO INDUCTOR 4.7MMH
L305	1-408-252-00	MICRO INDUCTOR 3.9MMH
L306	1-408-259-00	MICRO INDUCTOR 15MMH
L401	1-408-259-00	MICRO INDUCTOR 15MMH
L402	1-408-254-00	MICRO INDUCTOR 5.6MMH
L403	1-408-252-00	MICRO INDUCTOR 3.9MMH
L404	1-408-253-00	MICRO INDUCTOR 4.7MMH
L405	1-408-252-00	MICRO INDUCTOR 3.9MMH
L406	1-408-259-00	MICRO INDUCTOR 15MMH
L501	1-407-177-XX	MICRO INDUCTOR 470UH
L502	1-407-177-XX	MICRO INDUCTOR 470UH
L801	1-407-177-XX	MICRO INDUCTOR 470UH
LPF301	1-231-388-00	FILTER, LOWPASS
LPF401	1-231-388-00	FILTER, LOWPASS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
PL1	1-518-313-00	LAMP, PILOT
PL501	1-518-489-21	LAMP, PILOT
PL502	1-518-463-00	LAMP, PILOT
PL503	1-518-463-00	LAMP, PILOT
PM1	1-454-333-00	SOLENOID, PLUNGER
PM2	1-454-291-00	SOLENOID, PLUNGER
Q101	8-729-663-47	TRANSISTOR 2SC1364
Q102	8-729-663-48	TRANSISTOR 2SC1364-8
Q103	8-729-663-48	TRANSISTOR 2SC1364-8
Q104	8-729-663-48	TRANSISTOR 2SC1364-8
Q105	8-729-663-48	TRANSISTOR 2SC1364-8
Q106	8-729-663-48	TRANSISTOR 2SC1364-8
Q107	8-729-663-48	TRANSISTOR 2SC1364-8
Q108	8-729-663-48	TRANSISTOR 2SC1364-8
Q109	8-729-663-48	TRANSISTOR 2SC1364-8
Q110	8-729-663-48	TRANSISTOR 2SC1364-8
Q201	8-729-663-47	TRANSISTOR 2SC1364
Q202	8-729-663-48	TRANSISTOR 2SC1364-8
Q203	8-729-663-48	TRANSISTOR 2SC1364-8
Q204	8-729-663-48	TRANSISTOR 2SC1364-8
Q205	8-729-663-48	TRANSISTOR 2SC1364-8
Q206	8-729-663-48	TRANSISTOR 2SC1364-8
Q207	8-729-663-48	TRANSISTOR 2SC1364-8
Q208	8-729-663-48	TRANSISTOR 2SC1364-8
Q209	8-729-663-48	TRANSISTOR 2SC1364-8
Q210	8-729-663-48	TRANSISTOR 2SC1364-8
Q301	8-729-334-58	TRANSISTOR 2SC1345
Q302	8-729-663-48	TRANSISTOR 2SC1364-8
Q303	8-729-663-48	TRANSISTOR 2SC1364-8
Q304	8-729-663-48	TRANSISTOR 2SC1364-8
Q305	8-729-663-48	TRANSISTOR 2SC1364-8
Q306	8-729-663-48	TRANSISTOR 2SC1364-8
Q307	8-729-663-48	TRANSISTOR 2SC1364-8
Q308	8-729-663-48	TRANSISTOR 2SC1364-8
Q309	8-729-663-48	TRANSISTOR 2SC1364-8
Q310	8-729-663-48	TRANSISTOR 2SC1364-8
Q311	8-729-663-48	TRANSISTOR 2SC1364-8
Q312	8-729-100-13	TRANSISTOR 2SC2001
Q313	8-729-663-47	TRANSISTOR 2SC1364
Q314	8-729-663-48	TRANSISTOR 2SC1364-8
Q401	8-729-334-58	TRANSISTOR 2SC1345
Q402	8-729-663-48	TRANSISTOR 2SC1364-8
Q403	8-729-663-48	TRANSISTOR 2SC1364-8
Q404	8-729-663-48	TRANSISTOR 2SC1364-8
Q405	8-729-663-48	TRANSISTOR 2SC1364-8

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " ♠ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

COILS

- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q406	8-729-663-48	TRANSISTOR 2SC1364-8
Q407	8-729-663-48	TRANSISTOR 2SC1364-8
Q408	8-729-663-48	TRANSISTOR 2SC1364-8
Q409	8-729-663-48	TRANSISTOR 2SC1364-8
Q410	8-729-663-48	TRANSISTOR 2SC1364-8
Q411	8-729-663-48	TRANSISTOR 2SC1364-8
Q412	8-729-100-13	TRANSISTOR 2SC2001
Q413	8-729-663-47	TRANSISTOR 2SC1364
Q414	8-729-663-48	TRANSISTOR 2SC1364-8
Q501	8-729-203-02	TRANSISTOR 2SK30A-0
Q502	8-729-315-22	TRANSISTOR 2SD1152
Q503	8-729-315-22	TRANSISTOR 2SD1152
Q504	8-729-180-93	TRANSISTOR 2SD809
Q505	8-729-384-48	TRANSISTOR 2SA844
Q506	8-729-203-02	TRANSISTOR 2SK30A-0
Q507	8-729-384-48	TRANSISTOR 2SA844
Q508	8-729-173-13	TRANSISTOR 2SB731
Q510	8-729-663-47	TRANSISTOR 2SC1364
Q511	8-729-663-47	TRANSISTOR 2SC1364
Q512	8-729-602-67	TRANSISTOR 2SA1026-7
Q513	8-729-602-67	TRANSISTOR 2SA1026-7
Q514	8-729-663-48	TRANSISTOR 2SC1364-8
Q515	8-729-663-48	TRANSISTOR 2SC1364-8
Q601	8-729-180-93	TRANSISTOR 2SD809
Q602	8-729-180-93	TRANSISTOR 2SD809
Q603	8-729-288-02	TRANSISTOR 2SD880
Q604	8-729-663-47	TRANSISTOR 2SC1364
Q605	8-729-180-92	TRANSISTOR 2SD809
Q606	8-729-663-47	TRANSISTOR 2SC1364
Q607	8-729-602-67	TRANSISTOR 2SA1026-7
Q608	8-729-602-67	TRANSISTOR 2SA1026-7
Q609	8-729-663-47	TRANSISTOR 2SC1364
Q610	8-729-663-47	TRANSISTOR 2SC1364
Q611	8-729-663-47	TRANSISTOR 2SC1364
Q612	8-729-663-47	TRANSISTOR 2SC1364
Q613	8-729-663-47	TRANSISTOR 2SC1364
Q614	8-729-663-47	TRANSISTOR 2SC1364
Q615	8-729-663-47	TRANSISTOR 2SC1364
Q616	8-729-663-47	TRANSISTOR 2SC1364
Q617	8-729-602-67	TRANSISTOR 2SA1026-7
Q618	8-729-602-67	TRANSISTOR 2SA1026-7
Q619	8-729-602-67	TRANSISTOR 2SA1026-7
Q620	8-729-602-67	TRANSISTOR 2SA1026-7
Q621	8-729-602-67	TRANSISTOR 2SA1026-7
Q622	8-729-602-67	TRANSISTOR 2SA1026-7

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q623	8-729-602-67	TRANSISTOR 2SA1026-7			
Q624	8-729-663-47	TRANSISTOR 2SC1364			
Q625	8-729-663-47	TRANSISTOR 2SC1364			
Q626	8-729-102-03	TRANSISTOR 2SD1020			
Q627	8-729-102-03	TRANSISTOR 2SD1020			
Q628	8-729-103-43	TRANSISTOR 2SB734			
Q629	8-729-663-48	TRANSISTOR 2SC1364-8			
Q630	8-729-880-83	TRANSISTOR 2SB808			
Q631	8-729-880-83	TRANSISTOR 2SB808			
Q632	8-729-811-24	TRANSISTOR 2SD1012			
Q633	8-729-811-24	TRANSISTOR 2SD1012			
Q634	8-729-663-47	TRANSISTOR 2SC1364			
Q635	8-729-180-93	TRANSISTOR 2SD809			
Q636	8-729-602-67	TRANSISTOR 2SA1026-7			
Q637	8-729-663-47	TRANSISTOR 2SC1364			
Q638	8-729-663-47	TRANSISTOR 2SC1364			
Q639	8-729-103-43	TRANSISTOR 2SB734-4			
Q640	8-729-663-48	TRANSISTOR 2SC1364-8			
Q641	8-729-602-67	TRANSISTOR 2SA1026-7			
Q642	8-729-602-67	TRANSISTOR 2SA1026-7			
Q643	8-729-663-48	TRANSISTOR 2SC1364-8			
Q801	8-729-663-48	TRANSISTOR 2SC1364-8			
Q803	8-729-602-67	TRANSISTOR 2SA1026-7			
Q805	8-729-602-67	TRANSISTOR 2SA1026-7			
Q807	8-729-602-67	TRANSISTOR 2SA1026-7			
Q808	8-729-602-67	TRANSISTOR 2SA1026-7			
Q901	8-729-177-43	TRANSISTOR 2SD774			
Q902	8-729-103-43	TRANSISTOR 2SB734			
Q903	8-729-177-43	TRANSISTOR 2SD774			
Q904	8-729-103-43	TRANSISTOR 2SB734			
Q905	8-729-101-02	TRANSISTOR PH102			
Q906	8-729-101-02	TRANSISTOR PH102			
R101	1-244-915-51	CARBON	56K	5%	1/2W
R102	1-244-853-00	CARBON	150	5%	1/2W
R103	1-244-890-00	CARBON	5.1K	5%	1/2W
R104	1-244-924-00	CARBON	130K	5%	1/2W
R110	1-244-897-00	CARBON	10K	5%	1/2W
R111	1-244-929-00	CARBON	220K	5%	1/2W
R116	1-214-966-00	METAL	1.2M	1%	1/4W
R119	1-214-758-00	METAL	16K	1%	1/4W
R121	1-214-729-00	METAL	1K	1%	1/4W
R122	1-214-766-00	METAL	36K	1%	1/4W
R126	1-214-713-00	METAL	220	1%	1/4W
R127	1-214-131-00	METAL	910	1%	1/4W

NOTE:

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- Due to standardization, parts with part numbers (△-△△△-△△△-XX or △-△△△△-△△△-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

SEMICONDUCTORS

In each case, U : μ, for example: UA···: μA···, UPA···: μPA···, UPC···: μPC, UPD···: μPD···

COILS

- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R128	1-214-746-00	METAL	5.1K	1%	1/4W	
R130	1-214-741-00	METAL	3.3K	1%	1/4W	
R131	1-214-753-00	METAL	10K	1%	1/4W	
R132	1-214-741-00	METAL	3.3K	1%	1/4W	
R142	1-214-964-00	METAL	1M	1%	1/4W	
R145	1-214-758-00	METAL	16K	1%	1/4W	
R165	1-214-964-00	METAL	1M	1%	1/4W	
R201	1-244-915-51	CARBON	56K	5%	1/2W	
R202	1-244-853-00	CARBON	150	5%	1/2W	
R203	1-244-890-00	CARBON	5.1K	5%	1/2W	
R204	1-244-924-00	CARBON	130K	5%	1/2W	
R210	1-244-897-00	CARBON	10K	5%	1/2W	
R211	1-244-929-00	CARBON	220K	5%	1/2W	
R212	1-244-905-00	CARBON	22K	5%	1/2W	
R216	1-214-966-00	METAL	1.2M	1%	1/4W	
R219	1-214-758-00	METAL	16K	1%	1/4W	
R221	1-214-729-00	METAL	1K	1%	1/4W	
R222	1-214-766-00	METAL	36K	1%	1/4W	
R226	1-214-713-00	METAL	220	1%	1/4W	
R227	1-214-131-00	METAL	910	1%	1/4W	
R228	1-214-746-00	METAL	5.1K	1%	1/4W	
R230	1-214-741-00	METAL	3.3K	1%	1/4W	
R231	1-214-753-00	METAL	10K	1%	1/4W	
R232	1-214-741-00	METAL	3.3K	1%	1/4W	
R242	1-214-964-00	METAL	1M	1%	1/4W	
R245	1-214-758-00	METAL	16K	1%	1/4W	
R265	1-214-964-00	METAL	1M	1%	1/4W	
R301	1-244-909-00	CARBON	33K	5%	1/2W	
R304	1-244-873-00	CARBON	1K	5%	1/2W	
R314	1-214-964-00	METAL	1M	1%	1/4W	
R320	1-214-758-00	METAL	16K	1%	1/4W	
R337	1-214-966-00	METAL	1.2M	1%	1/4W	
R341	1-214-758-00	METAL	16K	1%	1/4W	
R349	1-214-746-00	METAL	5.1K	1%	1/4W	
R350	1-214-131-00	METAL	910	1%	1/4W	
R351	1-214-713-00	METAL	220	1%	1/4W	
R356	1-214-741-00	METAL	3.3K	1%	1/4W	
R360	1-214-753-00	METAL	10K	1%	1/4W	
R361	1-214-741-00	METAL	3.3K	1%	1/4W	
R366	1-214-739-00	METAL	2.7K	1%	1/4W	
R386	1-244-881-00	CARBON	2.2K	5%	1/2W	
R399	1-244-881-00	CARBON	2.2K	5%	1/2W	
R401	1-244-909-00	CARBON	33K	5%	1/2W	
R404	1-244-873-00	CARBON	1K	5%	1/2W	
R414	1-214-964-00	METAL	1M	1%	1/4W	

ELECTRICAL PARTS

Ref.No.	Part No.	Description				
R420	1-214-758-00	METAL	16K	1%	1/4W	
R437	1-214-966-00	METAL	1.2M	1%	1/4W	
R441	1-214-758-00	METAL	16K	1%	1/4W	
R449	1-214-746-00	METAL	5.1K	1%	1/4W	
R450	1-214-131-00	METAL	910	1%	1/4W	
R451	1-214-713-00	METAL	220	1%	1/4W	
R456	1-214-741-00	METAL	3.3K	1%	1/4W	
R460	1-214-753-00	METAL	10K	1%	1/4W	
R461	1-214-741-00	METAL	3.3K	1%	1/4W	
R466	1-214-739-00	METAL	2.7K	1%	1/4W	
R486	1-244-881-00	CARBON	2.2K	5%	1/2W	
R499	1-244-881-00	CARBON	2.2K	5%	1/2W	
R501	1-244-865-00	CARBON	470	5%	1/2W	
R502	1-244-865-00	CARBON	470	5%	1/2W	
R508	1-244-849-00	CARBON	100	5%	1/2W	
R509	1-244-849-00	CARBON	100	5%	1/2W	
R510	1-244-857-00	CARBON	220	5%	1/2W	
R511	1-244-897-00	CARBON	10K	5%	1/2W	
R512	1-244-873-00	CARBON	1K	5%	1/2W	
R513	1-244-879-00	CARBON	1.8K	5%	1/2W	
R514	1-244-857-00	CARBON	220	5%	1/2W	
R515	1-244-897-00	CARBON	10K	5%	1/2W	
R516	1-244-873-00	CARBON	1K	5%	1/2W	
R517	1-244-879-00	CARBON	1.8K	5%	1/2W	
R604	1-244-881-00	CARBON	2.2K	5%	1/2W	
R693 ⚠.	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R710 ⚠.	1-206-470-00	METAL	20	5%	2W	F
R718 ⚠.	1-212-855-00	FUSIBLE	8.2	5%	1/4W	F
R719 ⚠.	1-217-393-00	FUSIBLE	33	5%	1/4W	F
R819	1-244-868-00	CARBON	620	5%	1/2W	
R901	1-214-777-00	METAL	100K	1%	1/4W	
R905	1-214-960-00	METAL	680K	1%	1/4W	
R908	1-214-960-00	METAL	680K	1%	1/4W	
R911	1-214-743-00	METAL	3.9K	1%	1/4W	
R914	1-214-743-00	METAL	3.9K	1%	1/4W	
R950 ⚠.	1-217-379-00	FUSIBLE	2.2	5%	1/4W	F
R951 ⚠.	1-217-379-00	FUSIBLE	2.2	5%	1/4W	F
R3006	1-214-964-00	METAL	1M	1%	1/4W	
R4006	1-214-964-00	METAL	1M	1%	1/4W	
RV101	1-224-645-XX	RES, ADJ, CARBON 10K				
RV201	1-224-645-XX	RES, ADJ, CARBON 10K				
RV301	1-224-646-XX	RES, ADJ, CARBON 22K				
RV302	1-226-236-00	RES, ADJ, CARBON 10K				
RV401	1-224-646-XX	RES, ADJ, CARBON 22K				
RV402	1-226-236-00	RES, ADJ, CARBON 10K				

NOTE:

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

SEMICONDUCTORS
In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV501	1-226-740-00	RES, VAR, CARBON 20K/20K
RV502	1-226-560-00	RES, VAR, CARBON 5K
RV503	1-226-980-00	RES, VAR, CARBON 20K/20K
RV601	1-226-233-00	RES, ADJ, CARBON 1K
RV901	1-224-661-00	RES, ADJ, METAL GLAZE 50K
S601	1-552-809-00	SWITCH, SLIDE
S701	1-552-539-00	SWITCH, KEY BOARD
S702	1-552-539-00	SWITCH, KEY BOARD
S703	1-552-539-00	SWITCH, KEY BOARD
S704	1-552-539-00	SWITCH, KEY BOARD
S705	1-552-539-00	SWITCH, KEY BOARD
S706	1-552-539-00	SWITCH, KEY BOARD
S707	1-552-539-00	SWITCH, KEY BOARD
S708	1-553-235-00	SWITCH, KEY BOARD
S709	1-553-235-00	SWITCH, KEY BOARD
S801	1-552-532-00	SWITCH, PUSH
S802	1-552-532-00	SWITCH, PUSH
S901 ⚠.	1-553-318-00	(AEP,UK,E)......SWITCH, PUSH (AC POWER)
S901 ⚠.	1-553-319-00	(US,Canadian)...SWITCH, PUSH (AC POWER)
T901 ⚠.	1-447-319-00	(US,Canadian)...TRANSFORMER, POWER
T901 ⚠.	1-447-320-00	(E).............TRANSFORMER, POWER
T901 ⚠.	1-447-321-00	(AEP,UK)........TRANSFORMER, POWER

NOTE:

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μA···, UPA···: μPA···, UPC···: μPC,
UPD···: μPD···

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
  MF:μF, PF:μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTROLYTIC CAPACITORS

	RATING				→ : Use the high voltage rated one.	
CAP. (μF)	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→	→	→	1-121-392-00	→	1-121-393-00
4.7	→	→	→	1-121-395-00	→	1-121-396-00
10	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
22	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-419-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000	–	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	–
3300	1-121-661-00	1-123-075-00	1-123-071-00	–	–	–

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	–	–	–	–
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00	–	1-123-028-00
3.3	1-121-995-00	–	1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00	–	–
47	1-123-251-00	1-121-919-00	–	–
100	1-123-084-00	–	–	–

CERAMIC CAPACITORS

			RATING				
CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

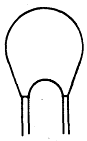
0.001μF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

		RATING		→ : Use the high voltage rated one.	
CAP. (μF)	25 VOLT.	50 VOLT.	CAP. (μF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

MYLAR CAPACITORS

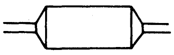
CAP. (μF)	RATING 50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	–	–
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	–	–
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	–	–
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	–	–
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



TANTALUM CAPACITORS

RATING →: Use the high voltage rated one.

CAP. (μF)	3.15 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.
0.01					→	→	1-131-396-00
0.015						→	1-131-397-00
0.022						→	1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	–	–	–	–	1-131-412-00	→	1-131-406-00
0.68	–	–	–	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	–	–	1-131-418-00	–	1-131-413-00	→	1-131-408-00
1.5	–	1-131-421-00	–	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	–	1-131-419-00	–	1-131-414-00	1-131-355-00	1-131-349-00
3.3	–	1-131-422-00	–	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	–	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	–	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	–
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	–			
68	1-131-394-00	1-131-388-00	–	–			
100	1-131-395-00	–	–	–			



TANTALUM CAPACITORS

CAP. (μF)	RATING 3 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	35 VOLT. PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			–	–	1-131-262-00	1-131-278-00
0.33			–	–	1-131-263-00	1-131-279-00
0.47			1-131-169-00	–	1-131-264-00	1-131-280-00
0.68			–	1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	–	1-131-266-00	1-131-282-00
1.5		1-131-250-00	–	–	1-131-267-00	1-131-283-00
2.2		–	–	1-131-259-00	1-131-268-00	1-131-284-00
3.3		–	1-131-255-00	–	1-131-269-00	–
4.7		1-131-251-00	1-131-171-00	–	1-131-270-00	–
6.8		–	–	1-131-260-00	1-131-271-00	–
10	–	–	1-131-256-00	–	1-131-272-00	–
15	–	1-131-252-00	–	1-131-261-00		
22	–	–	1-131-257-00	–		
33	1-131-176-00	1-131-253-00	1-131-173-00	–		
47	1-131-288-00	1-131-174-00	–	–		
100	1-131-177-00					

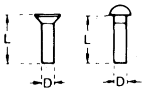
1/4 WATT CARBON RESISTORS

Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:

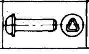
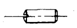
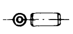
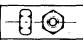
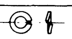
– P 3 x 10
L: Length in mm
D: Diameter in mm
Type of head
Indicated slotted-head only.
Unless otherwise indicated, it means cross-recessed head (Phillips type).



Nut, Washer, Retaining ring:

N 3
Diameter of usable screw or shaft
Reference designation

Reference Designation	Shape	Description	Remarks
		SCREWS	
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
		SELF-TAPPING SCREWS	
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
		SET SCREWS	
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
		NUT	
N		nut	
		WASHERS	
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
		RETAINING RINGS	
E		retaining ring	
G		grip-type retaining ring	

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Consumer Products Group
Technical Support Dept.

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9-951-016-11

STEREO-CASSETTE DECK

TC-K555

US Model
Canadian Model
AEP Model
UK Model
E Model

SUPPLEMENT

File this supplement with the service manual.

No. 1
February, 1983

CHANGED PORTION

- Addition of the record head azimuth adjustment.
- Modification of a part of the schematic diagram and the mounting diagram, due to the Dolby C Level Adjustment addition.

[Changed Parts List]

Ref. No.	Part No.	Description	
R165	1-214-964-00	METAL 1M 1% 1/4W	added
R265	1-214-964-00	METAL 1M 1% 1/4W	added
R3006	1-214-964-00	METAL 1M 1% 1/4W	added
R4006	1-214-946-00	METAL 1M 1% 1/4W	added
D701	8-719-902-33	DIODE SLR-34UR5	changed

Sony Corporation
Consumer Products Group
Technical Support Dept.

·950-841-82

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83C06138-1
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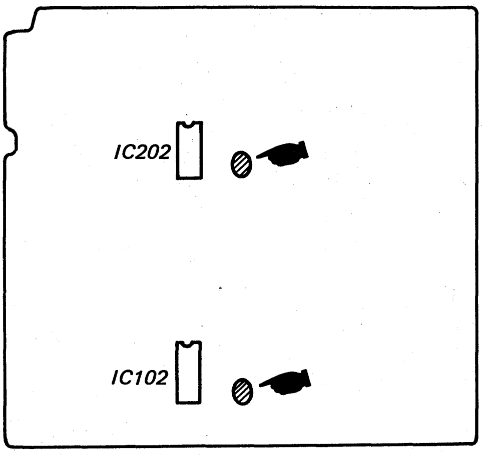
- **Addition of Dolby C level adjustment**

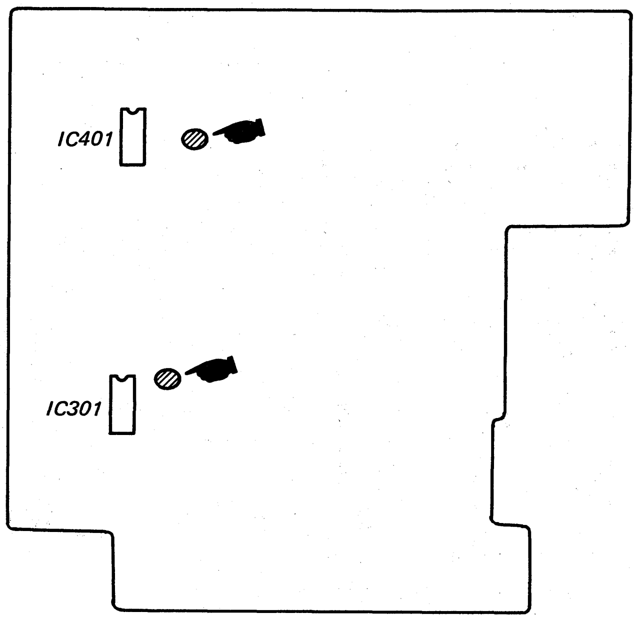
  Amp section – P35 –

  changed portion: ☛

[PLAYBACK BOARD]



[RECORD BOARD]



SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

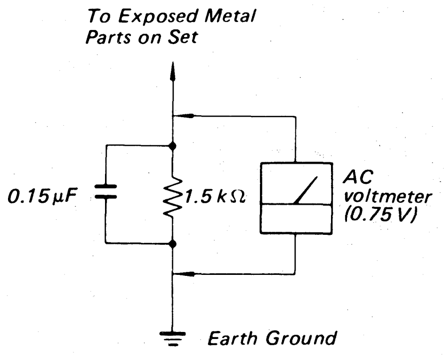


Fig. A. Using an AC voltmeter to check AC leakage.

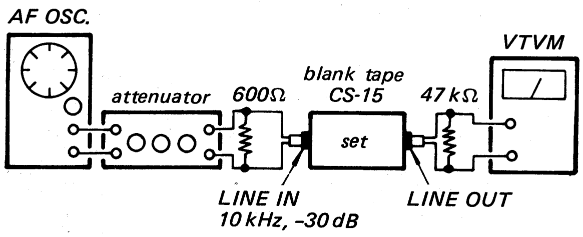
Record Head Azimuth Adjustment (Record head azimuth adjustment should be made later than playback head azimuth adjustment.)

Setting:

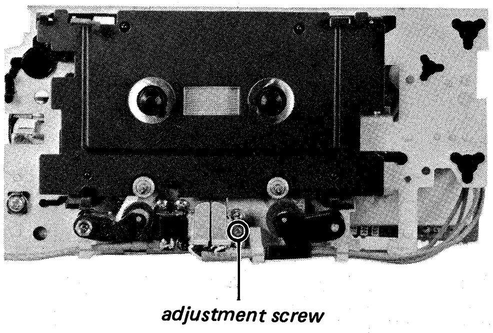
MONITOR: TAPE
REC LEVEL control: standard record
TAPE: TYPE I

Procedure:

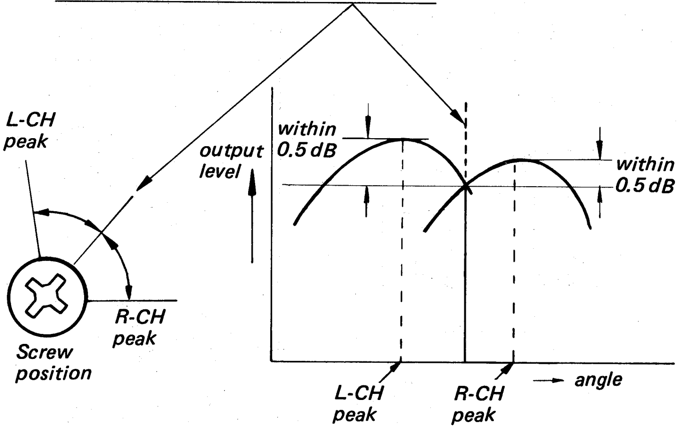
record and playback mode


AF OSC.
attenuator
600Ω
blank tape
CS-15
set
47 kΩ
VTVM
LINE IN
10 kHz, -30 dB
LINE OUT

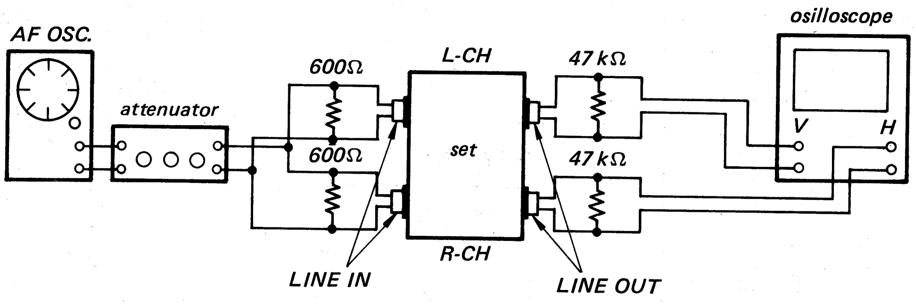
Adjustment Location:

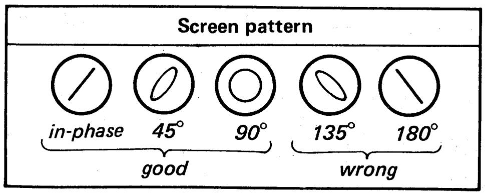

adjustment screw

1. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.


L-CH
peak
R-CH
peak
Screw
position
output
level
within
0.5 dB
within
0.5 dB
L-CH
peak
R-CH
peak
angle

2. Phase Check


AF OSC.
attenuator
600Ω
600Ω
L-CH
set
R-CH
47 kΩ
47 kΩ
osilloscope
V
H
LINE IN
LINE OUT


Screen pattern
in-phase
45°
90°
135°
180°
good
wrong

Adjust the screw so that L-CH and R-CH are in phase.

Specification:

Phase difference between L-CH and R-CH: less than 90°
Level difference between L-CH and R-CH: less than 1 dB

DOLBY C Level Adjustment

Setting:

MONITOR: TAPE
TAPE: TYPE I

1. Set DOLBY switch to DOLBY C.
   Adjust for obtaining the specification.

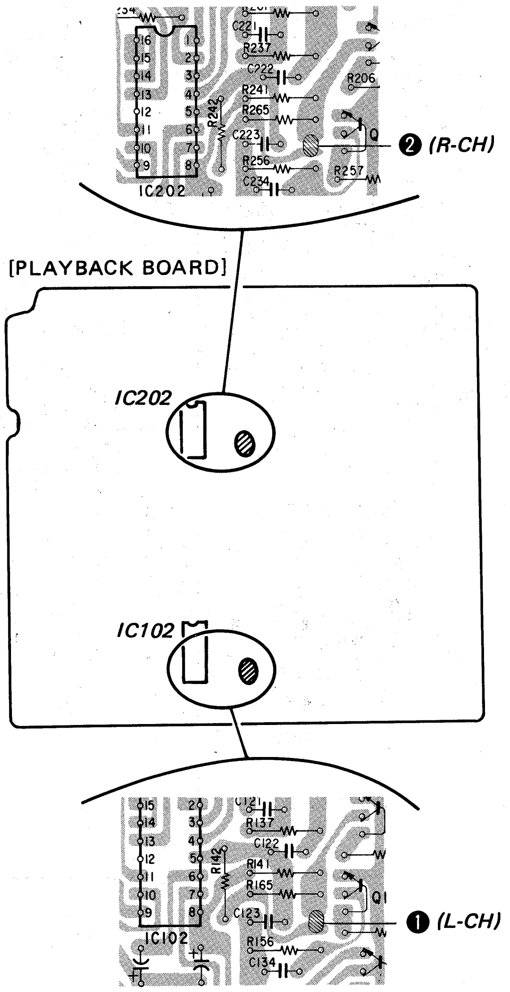
Specification:

- LINE OUT level: -25 dB ± 2 dB
- Level difference between L-CH and R-CH: less than 2 dB

Adjustment Location:

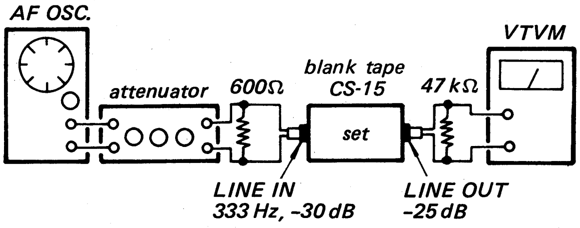
– playback board –

If LINE OUT level is higher than the specification, unsolder the portion marked by ❶ (L-CH), ❷ (R-CH).


IC202
C221
R237
C222
R206
R241
R265
R242
C223
Q
R256
R257
C234
❷ (R-CH)
[PLAYBACK BOARD]
IC202
IC102
C121
R137
C122
R141
R142
R165
Q1
C123
R156
C134
IC102
❶ (L-CH)

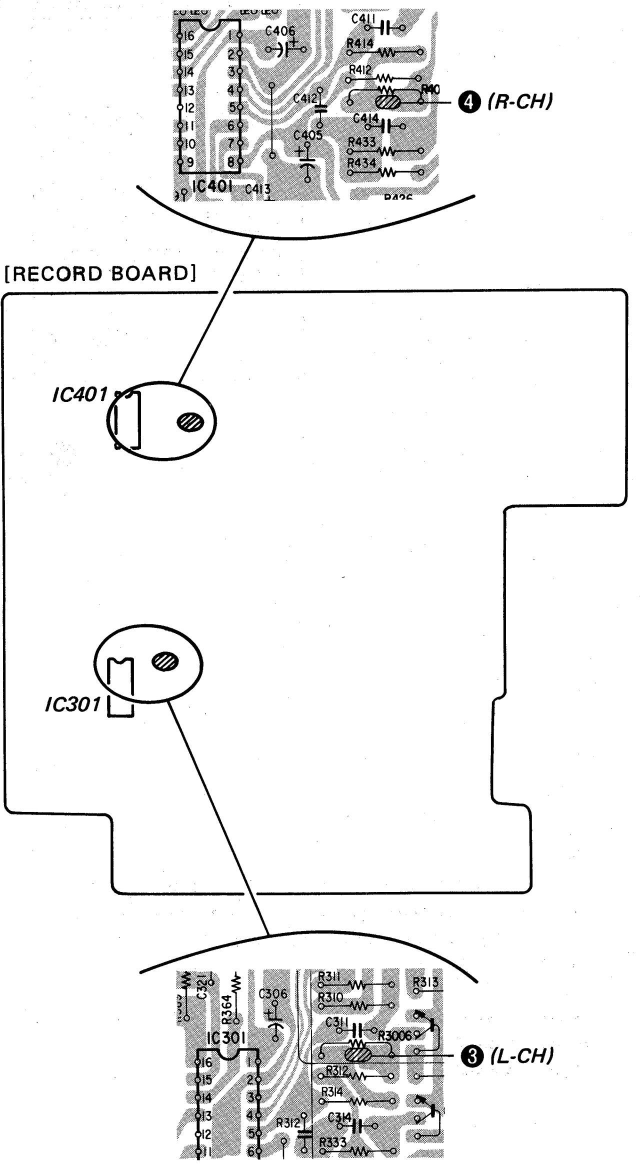
Procedure:

record and playback mode


AF OSC.
attenuator
600Ω
blank tape
CS-15
set
47 kΩ
VTVM
LINE IN
333 Hz, -30 dB
LINE OUT
-25 dB

– record board –

If LINE OUT level is lower than the specification, unsolder the portion marked by ❸ (L-CH), ❹ (R-CH).

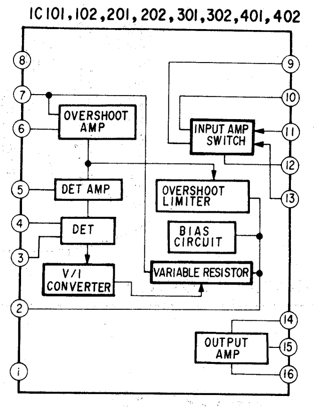

C406
C411
R414
R412
C412
R40
C414
C405
R433
R434
IC401
C413
❹ (R-CH)
[RECORD BOARD]
IC401
IC301
C321
R364
C306
IC301
R311
R313
R310
C311
R3006
R312
R314
R312
C314
R333
❸ (L-CH)

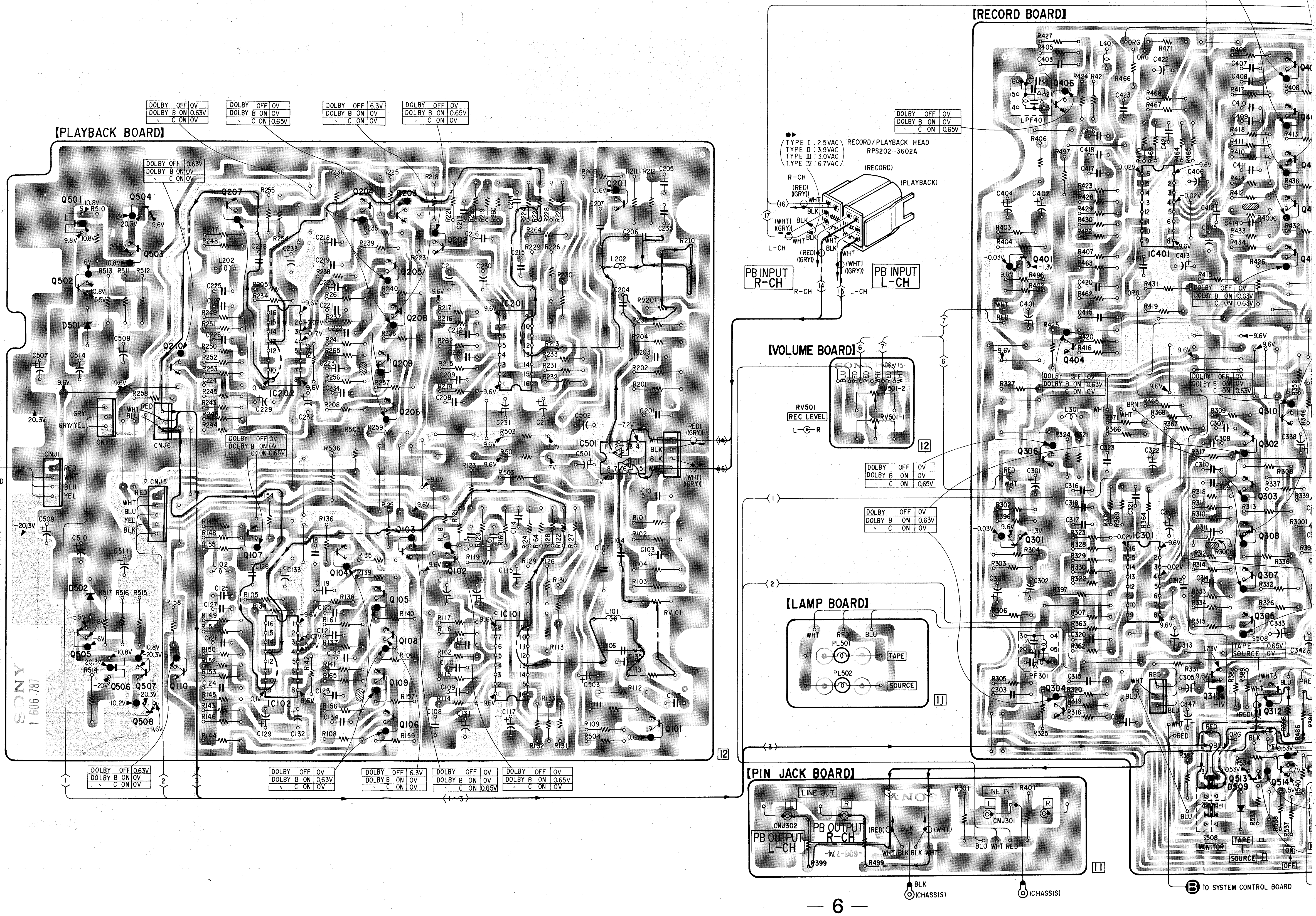
MOUNTING DIAGRAM

— Amp Section —

	D	E	F	G	H	I	J	K	L	M	N	O	P
Q IC		501 502 504 503 505 506 507 508	207 210 107 110	IC202 104 IC102	204 203 205 208 209 206 202 103 105 108 102 109 106	IC201 IC101	201 IC501 101				406 401 306 404 301 304	IC401 IC301	402 403 408 407 302 405 303 310 308 313 307 312 305 513 514
D		501 502											509

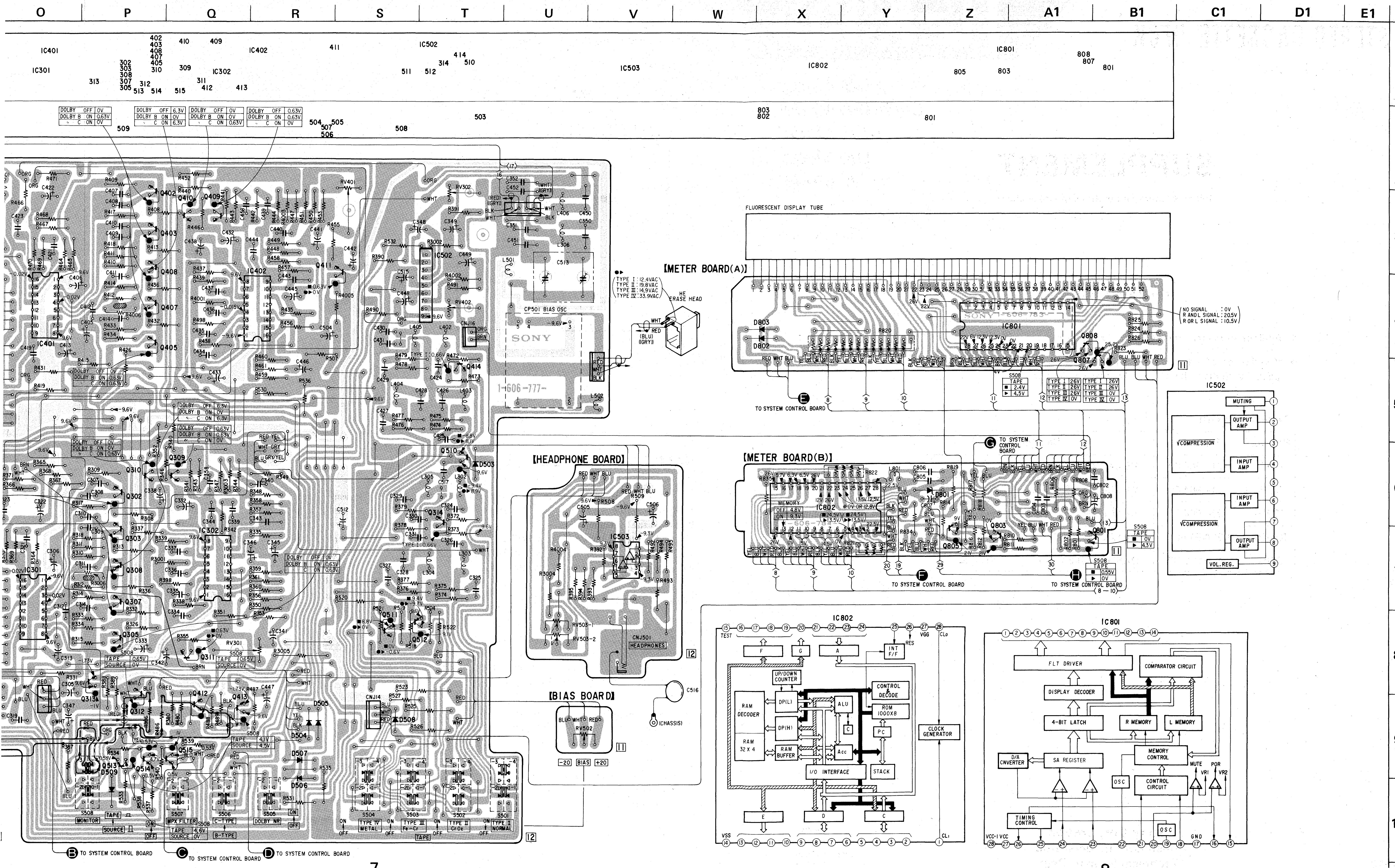
IC101,102,201,202,301,302,401,402


OVERSHOOT AMP
INPUT AMP SWITCH
DET AMP
OVERSHOOT LIMITER
DET
BIAS CIRCUIT
V/I CONVERTER
VARIABLE RESISTOR
OUTPUT AMP
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16


[PLAYBACK BOARD]
[RECORD BOARD]
[VOLUME BOARD]
[LAMP BOARD]
[PIN JACK BOARD]
DOLBY OFF 0V
DOLBY B ON 0.63V
C ON 0V
DOLBY B ON 0.65V
DOLBY OFF 6.3V
TYPE I : 2.5VAC
TYPE II : 3.9VAC
TYPE III : 3.0VAC
TYPE IV : 6.7VAC
RECORD/PLAYBACK HEAD
RPS202-3602A
(RECORD)
(PLAYBACK)
R-CH
L-CH
PB INPUT R-CH
PB INPUT L-CH
RV501
REC LEVEL
L-⊖-R
RV501-1
RV501-2
PL501
PL502
TAPE
SOURCE
LINE OUT
LINE IN
CNJ302
CNJ301
PB OUTPUT L-CH
PB OUTPUT R-CH
BLK (CHASSIS)
(CHASSIS)
CNJ1
CNJ5
CNJ6
CNJ7
TO SYSTEM CONTROL BOARD
TO SYSTEM CONTROL BOARD
A
B
IC101
IC102
IC201
IC202
IC301
IC401
IC501
LPF301
LPF401
S508
MONITOR
TAPE
SOURCE
ON
OFF
SONY 1 606 787
RED
WHT
BLU
YEL
BLK
GRY
ORG
BRN
11
12

Note:

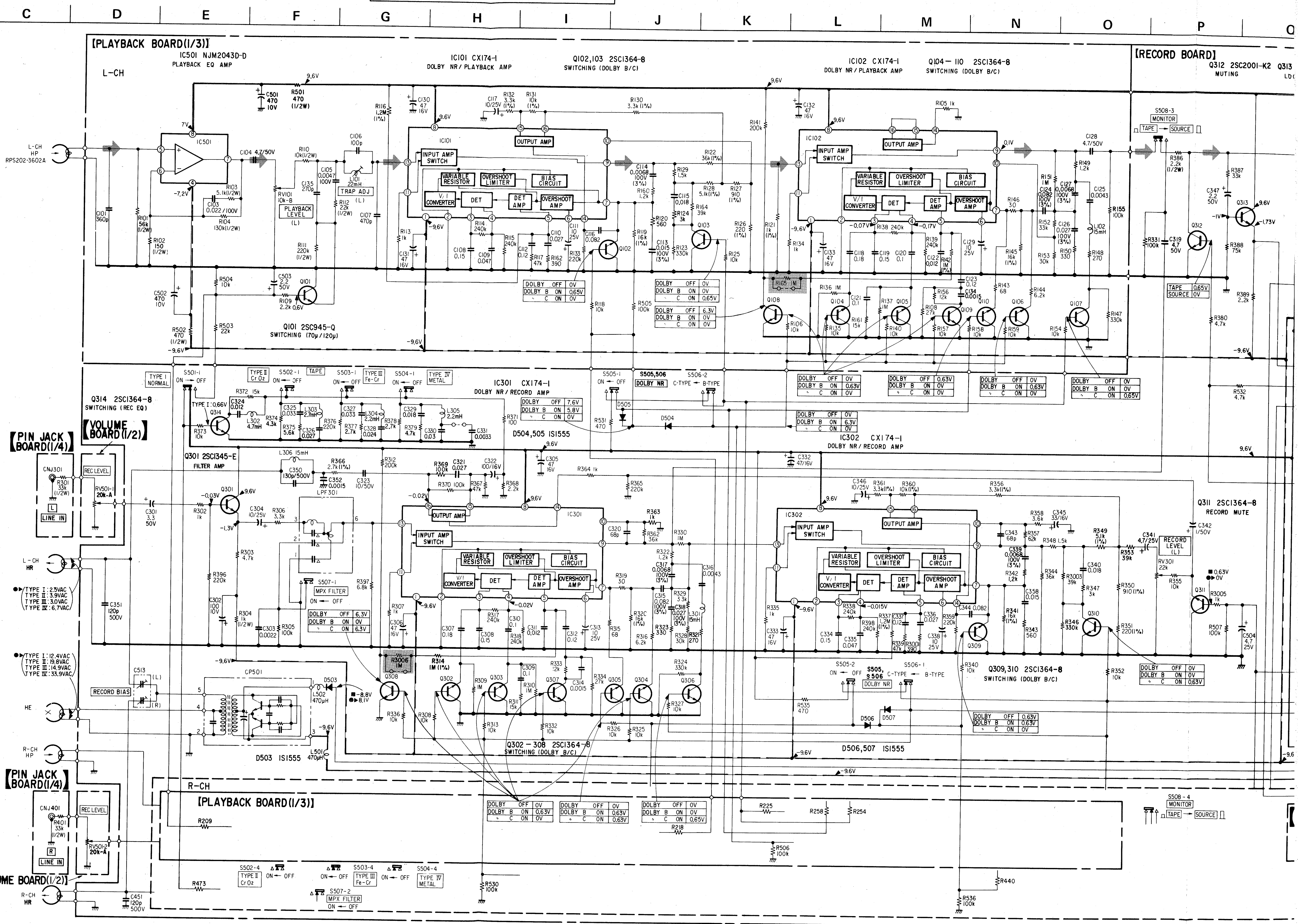
- ○—: parts extracted from the component side.
- ●—: parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- ▨ : B + pattern
- ░ : B - pattern
- ━━►━ : signal path
- ━ ━ ━► : L-CH signal path
- ━·━·━► : R-CH signal path

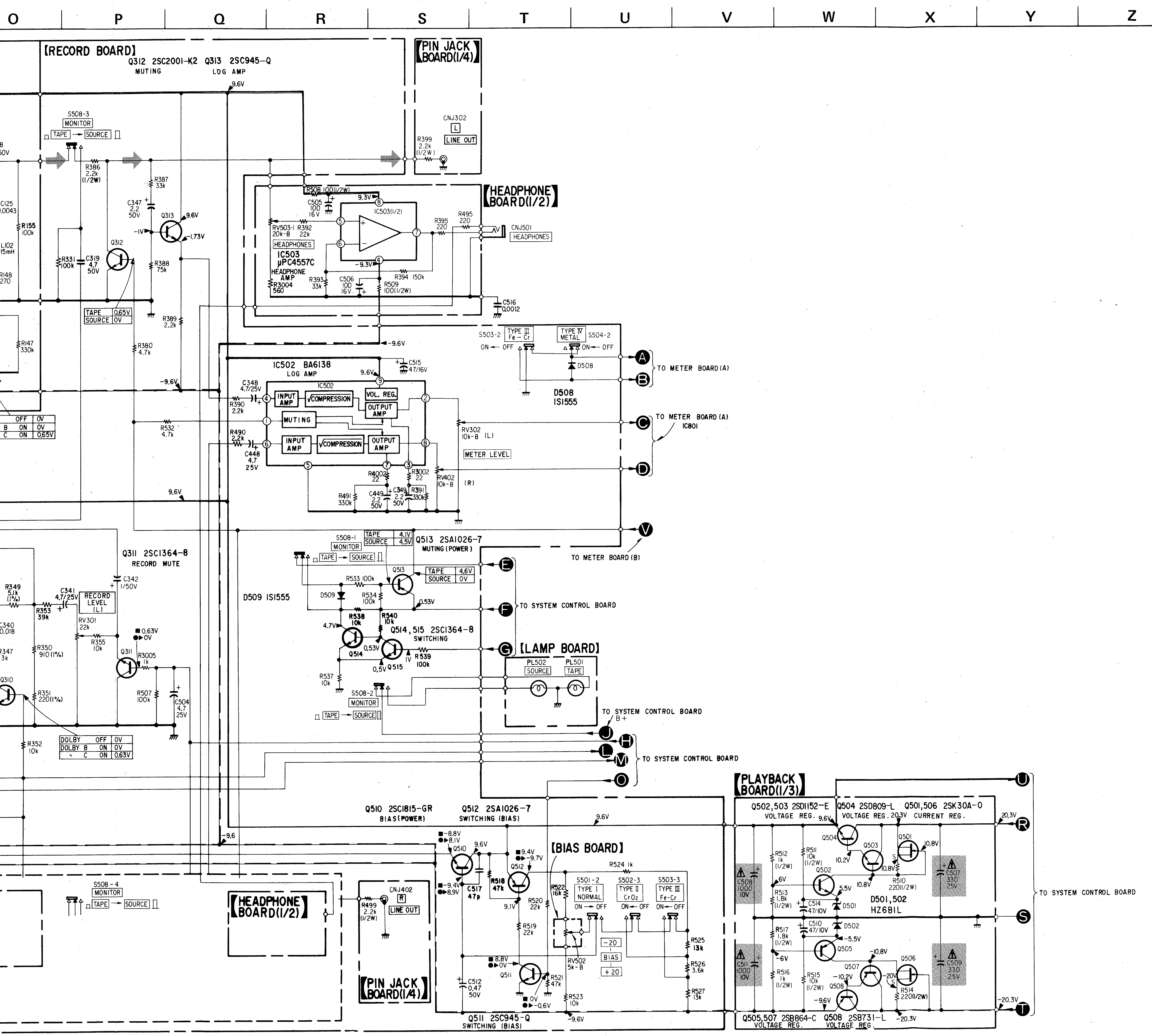

O P Q R S T U V W X Y Z A1 B1 C1 D1 E1
1 2 3 4 5 6 7 8 9 10
IC401 IC301 IC402 IC302 IC502 IC503 IC802 IC801
FLUORESCENT DISPLAY TUBE
【METER BOARD(A)】
【METER BOARD(B)】
【HEADPHONE BOARD】
【BIAS BOARD】
CP501 BIAS OSC
SONY
1-606-777-
HE ERASE HEAD
TYPE I : 12.4VAC
TYPE II : 19.8VAC
TYPE III : 14.9VAC
TYPE IV : 33.9VAC
NO SIGNAL : 0V
R AND L SIGNAL : 20.5V
R OR L SIGNAL : 10.5V
DOLBY OFF 0V
DOLBY B ON 0.63V
DOLBY C ON 0V
DOLBY OFF 6.3V
DOLBY B ON 0V
DOLBY C ON 0V
DOLBY OFF 0.63V
DOLBY B ON 0.63V
DOLBY C ON 0.63V
TAPE SOURCE 0.65V
S508 TAPE 2.4V 4.5V
S508 TAPE 0.55V 0V
S508 TAPE 0V 4.3V
TYPE I 26V
TYPE II 26V
TYPE III 26V
TYPE IV 0V
TYPE I 26V
TYPE II 26V
TYPE III 0V
TYPE IV 0V
CNJ501 HEADPHONES
RV503-1 RV503-2
RV502
-20 BIAS +20
C516
(CHASSIS)
S508 MONITOR TAPE SOURCE
S507 MPX FILTER
S506 C-TYPE B-TYPE
S505 DOLBY NR ON OFF
S504 TYPE IV METAL
S503 TYPE III Fe-Cr
S502 TYPE II CrO2
S501 TYPE I NORMAL
TAPE
TO SYSTEM CONTROL BOARD
TO SYSTEM CONTROL BOARD
TO SYSTEM CONTROL BOARD
IC502
MUTING
OUTPUT AMP
√COMPRESSION
INPUT AMP
INPUT AMP
√COMPRESSION
OUTPUT AMP
VOL. REG.
IC802
TEST
RES
VGG
CL0
F G A
INT F/F
UP/DOWN COUNTER
CONTROL DECODE
RAM DECODER
DP(L)
DP(H)
ALU
ROM 1000X8
RAM 32 X 4
RAM BUFFER
Acc
PC
STACK
I/O INTERFACE
CLOCK GENERATOR
E D C
VSS
CL1
IC801
FLT DRIVER
COMPARATOR CIRCUIT
DISPLAY DECODER
4-BIT LATCH
R MEMORY
L MEMORY
D/A CNVERTER
SA REGISTER
MEMORY CONTROL
OSC
CONTROL CIRCUIT
MUTE
VR1
POR
VR2
TIMING CONTROL
OSC
VCC-1 VCC
GND

SCHEMATIC DIAGRAM

– Amp Section –

▨ --- changed portion


A B C D E F G H I J K L M N O P Q
[PLAYBACK BOARD(1/3)]
L-CH
IC501 NJM2043D-D
PLAYBACK EQ AMP
IC101 CX174-I
DOLBY NR/PLAYBACK AMP
Q102,103 2SC1364-8
SWITCHING (DOLBY B/C)
IC102 CX174-I
DOLBY NR/PLAYBACK AMP
Q104 – 110 2SC1364-8
SWITCHING (DOLBY B/C)
[RECORD BOARD]
Q312 2SC2001-K2
MUTING
L-CH HP RPS202-3602A
INPUT AMP SWITCH
OUTPUT AMP
VARIABLE RESISTOR
OVERSHOOT LIMITER
BIAS CIRCUIT
V/I CONVERTER
DET
DET AMP
OVERSHOOT AMP
PLAYBACK LEVEL (L)
TRAP ADJ (L)
Q101 2SC945-Q
SWITCHING (70μ/120μ)
S508-3 MONITOR
TAPE → SOURCE
R165 1M
TYPE I NORMAL
S501-1 ON — OFF
TYPE II CrO2
S502-1 ON — OFF
TAPE
S503-1 ON — OFF
TYPE III Fe-Cr
S504-1 ON — OFF
TYPE IV METAL
IC301 CX174-I
DOLBY NR/RECORD AMP
S505-1 ON — OFF
S505,506 DOLBY NR
S506-2 C-TYPE — B-TYPE
Q314 2SC1364-8
SWITCHING (REC EQ)
[PIN JACK BOARD(1/4)]
[VOLUME BOARD(1/2)]
D504,505 1S1555
IC302 CX174-I
DOLBY NR/RECORD AMP
Q301 2SC1345-E
FILTER AMP
CNJ301
REC LEVEL
RV501-1 20k-A
LINE IN
LPF301
S507-1 MPX FILTER ON — OFF
L-CH HR
TYPE I: 2.5VAC
TYPE II: 3.9VAC
TYPE III: 3.0VAC
TYPE IV: 6.7VAC
TYPE I: 12.4VAC
TYPE II: 19.8VAC
TYPE III: 14.9VAC
TYPE IV: 33.9VAC
RECORD BIAS
CP501
HE
R3006 1M
Q302 – 308 2SC1364-8
SWITCHING (DOLBY B/C)
D503 1S1555
D506,507 1S1555
Q309,310 2SC1364-8
SWITCHING (DOLBY B/C)
Q311 2SC1364-8
RECORD MUTE
RECORD LEVEL (L)
R-CH HP
R-CH
[PLAYBACK BOARD(1/3)]
[PIN JACK BOARD(1/4)]
CNJ401
RV501-2 20k-A
[VOLUME BOARD(1/2)]
R-CH HR
S502-4 TYPE II CrO2 ON — OFF
S503-4 TYPE III Fe-Cr ON — OFF
S504-4 TYPE IV METAL ON — OFF
S507-2 MPX FILTER ON — OFF
S508-4 MONITOR
TAPE → SOURCE
DOLBY OFF / DOLBY B ON / C ON


O P Q R S T U V W X Y Z A1 B1 C1 D1 E1
1 2 3 4 5 6 7 8 9 10
【RECORD BOARD】
Q312 2SC2001-K2 MUTING
Q313 2SC945-Q LOG AMP
【PIN JACK BOARD(1/4)】
CNJ302
LINE OUT
S508-3 MONITOR
TAPE → SOURCE
R399 2.2k (1/2W)
R386 2.2k (1/2W)
R387 33k
C347 2.2 50V
Q313 9.6V -1.73V
R331 100k
C319 4.7 50V
R388 75k
R389 2.2k
R380 4.7k
R155 100k
C125 0.0043
L102 15mH
R148 270
R147 330k
【HEADPHONE BOARD(1/2)】
R506 100(1/2W)
C505 100 16V
IC503(1/2)
RV503-1 20k-B
R392 22k
IC503 μPC4557C HEADPHONE AMP
HEADPHONES
R3004 560
R393 33k
C506 100 16V
R509 100(1/2W)
R394 150k
R395 220
R495 220
CNJ501 HEADPHONES
C516 0.0012
S503-2 TYPE II Fe-Cr ON ← OFF
TYPE IV METAL S504-2 ON → OFF
D508
D508 1S1555
TO METER BOARD (A)
TO METER BOARD (A) IC801
IC502 BA6138 LOG AMP
C515 47/16V
C348 4.7/25V
R390 2.2k
INPUT AMP
√COMPRESSION
VOL. REG.
OUTPUT AMP
MUTING
R490 2.2k
C448 4.7 25V
R532 4.7k
RV302 10k-B (L)
METER LEVEL
RV402 10k-B (R)
R4002 22
R3002 22
R491 330k
C449 2.2 50V
C349 2.2 50V
R391 330k
S508-1 MONITOR
TAPE 4.1V SOURCE 4.5V
Q513 2SA1026-7 MUTING (POWER)
TAPE 4.6V SOURCE 0V
TO METER BOARD (B)
Q311 2SC1364-8 RECORD MUTE
R349 5.1k (1%)
C341 4.7/25V
C342 1/50V
RECORD LEVEL (L)
RV301 22k
R353 39k
R355 10k
R350 910(1%)
R351 220(1%)
Q311
R3005 1k
R507 100k
C504 4.7 25V
R352 10k
DOLBY OFF 0V
DOLBY B ON 0V
C ON 0.63V
D509 1S1555
R533 100k
R534 100k
R538 10k
R540 10k
Q514, 515 2SC1364-8 SWITCHING
R539 100k
R537 10k
TO SYSTEM CONTROL BOARD
【LAMP BOARD】
PL502 SOURCE
PL501 TAPE
S508-2 MONITOR
TO SYSTEM CONTROL BOARD B+
TO SYSTEM CONTROL BOARD
Q510 2SC1815-GR BIAS(POWER)
Q512 2SA1026-7 SWITCHING (BIAS)
【BIAS BOARD】
R524 1k
S501-2 TYPE I NORMAL
S502-3 TYPE II CrO2
S503-3 TYPE III Fe-Cr
ON ← OFF
-20 BIAS +20
C517 47p
R518 47k
R520 22k
R519 22k
R522 16k
RV502 5k-B
R521 47k
R523 10k
R525 13k
R526 3.6k
R527 13k
C512 0.47 50V
Q511 2SC945-Q SWITCHING (BIAS)
S508-4 MONITOR
【HEADPHONE BOARD(1/2)】
CNJ402
R499 2.2k (1/2W)
LINE OUT
【PIN JACK BOARD(1/4)】
【PLAYBACK BOARD(1/3)】
Q502,503 2SD1152-E VOLTAGE REG.
Q504 2SD809-L VOLTAGE REG.
Q501,506 2SK30A-O CURRENT REG.
R512 1k (1/2W)
R511 10k (1/2W)
C508 1000 10V
R513 1.8k (1/2W)
C514 47/10V
D501
R510 220(1/2W)
D501,502 HZ6B1L
C507 330 25V
C510 47/10V
D502
R517 1.8k (1/2W)
C511 1000 10V
R516 1k (1/2W)
R515 10k (1/2W)
R514 220(1/2W)
C509 330 25V
Q505,507 2SB864-C VOLTAGE REG.
Q508 2SB731-L VOLTAGE REG.
TO SYSTEM CONTROL BOARD
A B C D E F G H J L M O R S T U V

Note:

- ➡ : signal path
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unlessotherwise noted. kΩ: 1000Ω, MΩ: 1000kΩ
- ☐ : panel designation.
- ☐ : adjustment for repair.
- ——— : B + bus.
- – – – : B – bus.
- Readings are taken under no-signal conditions with a VOM (50kΩ/V).
- AC voltage readings in the bias oscillator with a VTVM.

Note: Voltages are measured with a VOM (50kΩ/V).

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SONY **WEGA**

WERKSTATT-INFO

Produktart: HIFI
Modell: TC-K555ESII
Name: WE/kr.
11 '84

Die Rec/Pb-Köpfe der Modelle TC-K555ES und TC-K555ESII sind **nicht** identisch.

Im TC-K555ESII wird eine Kopfeinheit verwendet, deren Wicklungen aus LC-OFC-Draht bestehen. LC-OFC steht für "Linear Crystal Oxygen Free Copper", was soviel wie **"linear-kristallines sauerstofffreies Kupfer"** bedeutet. Die Vorteile dieses Materials liegen vor allem in der hohen Leitfähigkeit bei geringster Eigenkapazität.

Irrtümlicherweise wurde im Service-Manual des TC-K555ES/II die ET-Nr. des Tonkopfes falsch angegeben. Ändern Sie bitte die ET-Nr. auf Seite 51 wie folgt:

falsche ET-Nr.	**richtige ET-Nr.**
8-825-500-30	8-825-500-**31**

Abteilung Technische Information